SCIENTIFIC, MEDICAL, AND TECHNICAL BOOKS

PUBLISHED IN THE
UNITED STATES OF AMERICA

A Selected List of Titles in Print with Annotations

SUPPLEMENT OF BOOKS PUBLISHED 1945-1948

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NEW YORK PUBLIC LIBRARY

PREPARED UNDER THE DIRECTION OF THE NATIONAL RESEARCH COUNCIL'S COMMITTEE ON BIBLIOGRAPHY OF AMERICAN SCIENTIFIC AND TECHNICAL BOOKS

WASHINGTON
1950

NATIONAL RESEARCH COUNCIL

COMMITTEE ON

AMERICAN SCIENTIFIC AND TECHNICAL BIBLIOGRAPHY

PREFACE

THE purpose of this work is to supply descriptions of the outstanding scientific, medical and technical books written by citizens of Canada and the United States of America, published in the U.S.A., and available for both domestic and foreign distribution. Its origins are fully described in the Preface to the first volume published in 1946 a description of which is to be found under number 13a in the present book.

A primary motive in the establishment of the series was the furthering of cultural relations between the United States of America and other nations Experience with the first volume has shown that it has considerable usefulness in our own country as well as in foreign countries. The original work represented a selection from books published during fifteen years 1930–1944 The present supplement provides a selection of books published in original or substantially revised editions during the years 1945–1948

The scope in regard to kinds of publications is the same as in the 1930–44 compilation Again, books published in regular book trade channels predominate. Monographs symposia and papers published by American scientific and technical societies are included but these are not so fully represented as trade books primarily because many such publications are printed for members of the publishing society and for exchange with other societies rather than for general distribution A selection of documents published by the National Government is included but the publications of state and local governments are not represented, except for books published by state university presses and distributed through established book trade channels. Manufacturer's publications except for one or two titles have been excluded. Suggestions as to other sources of information about American publications in these categories are given in the Introduction to the original volume.

The subject scope of the work is indicated in the title and in more detail in the Table of Contents. Medicine the pure and applied sciences, and technology are covered, but there are certain exceptions The social sciences are omitted except for certain works in such fields as nursing and psychology where some books which are listed are equally useful for sociological and technical information A few small areas of technology for example the technical aspects of printing and allied arts, are not covered at all and other semi-technical fields, of which gardening and military tactics are examples are covered less thoroughly than such fields as electrical engineering. In these semi technical fields the editorial policy was to include the books of good quality which were turned up in the course of work on other parts of the list but not to pursue the subjects to the extent of special research.

As in the original volume, the selection in most fields of knowledge is a liberal one. Throughout the selection process the aim has been to choose the books of merit among those which met the gross qualifications of date of publication author's citizenship and availability The selections on a given subject are intended to represent the books that would be available in a well-stocked American library with an active collection in that subject. The list should be viewed as one of important and useful books rather than a list of "best" books.

Elementary and secondary school textbooks and books written on these educational levels have been excluded but well-written books for lay readers and a select number of vocational school textbooks have been included. Among these books preference has been given to books suitable for home reading and self instruction. Well-established college textbooks, and new texts which possess useful novel features have been included because of the usefulness of such books in libraries and to some persons no longer attending schools but no effort was made to include all or even most of the "standard texts currently used in American colleges and universities

Books known to be out of print at the end of year 1944 were not described in our original volume. Because the present volume covers a much shorter period less attention was paid to eliminating books which had gone out of print on the theory that few of the books worth inclusion would have been allowed to go out of print within such a short span of years. However several dozen otherwise eligible titles were dropped for this reason before the manuscript was sent to the printer

Although most American publishers cooperated wholeheartedly with the Committee and

the Editor in the supplying of information and copies of their books for examination several refused cooperation. The publications of these firms are poorly represented, if at all because the editorial procedure adopted for the preparation of this supplement required copies of the books for examination

The procedure of selection was as follows As the first step the Editor and his staff read through the comprehensive *Cumulative Book Index* and selected lists such as *United States Quarterly Book List Science News Letter* and *New Technical Books* and made out slips for all of the books which appeared to be eligible These slips were arranged by publishers. A statement of the purpose of the Committee's work and the general eligibility requirements was drawn up Each publisher represented in the preliminary lists was sent a copy of this statement together with the list of books published by him which appeared to be eligible. The publishers were asked to eliminate any books which did not meet the Committee's general requirements for eligibility for example those by foreign authors, and were asked to suggest additional titles which appeared to be eligible. Examination copies of all books to be considered were requested

When the books were received they were examined by the Editor and his associates. Books which were patently ineligible were eliminated at this stage. Descriptions similar to and in many cases identical with the descriptions in the present book were prepared for the books which survived this preliminary test. Next, these descriptions were classified by subject and the subject lists were sent to specialists in various fields who had agreed to act as consultants to the Committee. Our consultants made many valuable suggestions both as to books which could be dropped from the lists and books which should be added. Several of them even undertook the rewriting of some of the annotations in order to improve the accuracy of the descriptions

Eventually the final selection of books was made by the Editor on the basis of his own judgment, the reviews in periodicals and the recommendations of the consultants. The Editor is responsible also for the final form of the notes As is customary he assumes the responsibility for all of the faults of the selections and the book descriptions Nevertheless, whatever excellent qualities the work has are definitely the result of collaboration among the Editor his assistants the Committee and, above all, the consultants.

Classification of scientific and technical literature is a vexatious problem which constantly grows more difficult as areas of knowledge which once had fairly definite boundaries tend to merge with adjacent areas Classification of a comprehensive small list is even more difficult than classification of a comprehensive large list. Furthermore, the principles of good typography make it inadvisable to set up either a main heading or a subheading and enter only one or two books under it. Accordingly many of the subheadings found in our original volume are not present in this supplement. In several fields the subheading "General" now includes several very specialized books which were not numerous enough to justify specific subheadings. In some instances it proved necessary to telescope several of the sub-groups formerly used. An effort was made in the preparation of the subject index to compensate for inadequacies of the classification

The bibliographical descriptions and abbreviations used in the first volume proved to be adequate and have been repeated without change in this one In most cases no attention has been paid to preliminary matter included before the start of the main paging, hence the number of pages given represents the body of the book. However when two sets of pages are indicated for example "143 21 p.," supplementary paging has been noted. Illustrative material is described simply Any graphic or pictorial matter aside from printed text has been indicated by the phrase illus Colored illustrations have been indicated by the abbreviation col d. Colored illustrations combined with black and white are indicated by "(part col d) The only dimension included is height, expressed in centimeters abbreviated cm. When binding is not described cloth or other "hard binding can be assumed in most cases Paper bindings were indicated when it was known to the editor that the books were supplied only in paper When both paper and cloth bindings are available both bindings are listed with their respective prices.

During the three months preceding the time when the manuscript was sent to press, all publishers were asked to supply the current prices of their books and also to indicate any special prices or additional charges made to buyers in other countries. The prices given in the printed work represent the information supplied by the publishers, but not all publishers were careful to supply information on foreign charges. Prices in this book are therefore not guaranteed. Inquiries about current

prices should be made of the publisher in all cases where it is essential to have an accurate price.

The headings listed under "*Contents*" have been taken directly from the books When it was necessary to abridge the table of contents of a book, an effort was made to select head ings which illustrate the book s scope and special features The notes are designed to supple ment the information given out in the titles and tables of contents especially to bring out un usual features indicate uses and reader groups not indicated in the titles, and to mention the more significant changes in new editions The number that follows the word *Note*" in many instances refers to an entry in our original vol ume where, in most cases an earlier edition of the book is described. In a few cases the ref erence is made to a description of a companion or related book. Some of the notes were taken with little or no change from the New York Public Library's bimonthly *New Technical Books* As already mentioned a few were written or revised by our consultants. All of the others were written by the editor and his staff

Several persons who have used our first volume have made suggestions for added features that would increase the work s usefulness. Some of these suggestions have been adopted. Other equally worthwhile ones were not adopted because putting them into practice would have added to the already considerable expense of preparing the work. Among the suggestions which were seriously considered but not followed, was the addition of Library of Congress card numbers. Inclusion of these numbers would have added little to the length of the book but would have increased the clerical costs by several hundred dollars. A suggestion that the outstanding scientific, medical and technical periodicals be included was voted down for essentially the same rea son. Nevertheless suggestions for the improve ment of the work are welcomed by both the Committee and the Editor

During the preparation of both the original work and the present supplement, an Execu tive Subcommittee acted for the larger Com mittee in overseeing compilation of the manu script and its printing after general editorial policy had been agreed upon Dr Fulton also served as the most active and (from the Edi tor's standpoint) the most available member of the Subcommittee. His willingness to be con sulted on all kinds of editorial questions both minor and major his judicious advice and his wide knowledge of the scientific and medical worlds were essential factors in successful completion of the work.

Again the Committee has been fortunate in securing Mr Daniel C Haskell to mark the manuscript copy for the printer and read all of the proofs Members of the Editor's staff and others who have made substantial contributions to the work included Barbara Barry Joseph C. Borden, Jack E. Brown, Louise Cross Beatrice Libraire Russell N Thatcher John N Waddell, Bertrand M Walsh Margaret Ware and Emilia Wilder Jack E. Brown compiled the subject and author indexes.

The following persons in addition to the Committee gave advice or served as consult ants and the thanks of both the Editor and the Committee are gratefully extended to them

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Scientific, Medical, and Technical Books

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SCIENCE

GENERAL

BAITSELL GEORGE ALFRED, editor

Science in progress. Fourth series. New Haven Yale University Press, 1945 331 p illus. 24 cm. (The Society of the Sigma Xi. National lectureships 1943 and 1944) $4 00 1

Contents: Preface by George A. Baitsell. Foreword, by Lorande Loss Woodruff. Illustrations. Psychological aspects of military aviation, by W. R. Miles. The physical structure and biological action of nerve cells, by D W Bronk. Energy and vision, by S. Hecht. Chemical transmission of nerve impulses, by O. Loewi. The mathematical nature of physical theories, by G. D Birkhoff. The magnetic approach to the absolute zero of temperature, by P Debye. The drift toward equilibrium, by H Eyring. Streams of atoms, by I. I. Rabi. Adventures in vacuum chemistry by K. C. D Hickman. Present status of the vitamin B complex, by C. A. Elvehjem. Blood and blood derivatives, by E. J. Cohn. References. Index.

Science in progress. Fifth series New Haven Yale University Press 1947 353 p. illus. 24 cm. (The Society of the Sigma Xi. National lectureships 1945 and 1946) $5 00 2

Contents. Preface, by George A. Baitsell. Illustrations. Introduction. The future of scientific research in the postwar world, by F B. Jewett. The interior of the earth, by J. B. Macelwane. Development of betatron and applications of high-energy radiations, by D W Kerst. Contact catalysis between two world wars, by H S Taylor Fundamentals of oxidation and respiration, by L. Michaelis Complement: immunity intermediary diagnostic drugs, chemical curiosity by M. Heidelberger Genes and the chemistry of the organism, by G. W Beadle. Concerning the cancer problem, by P Rous. Plant diseases are shifty enemies, by E. C. Stakman. Living cells in action, by C. C. Speidel. Recent advances in our knowledge of the anterior pituitary hormones, by H. M. Evans. References. Index.

Note (1) Every volume in this well-known series contains ten or more papers, each of which provides an interpretative summary of the present state of knowledge, or of recent progress, in specific area of scientific interest. In most cases the authors are men who have themselves made significant contributions to the fields that are the subjects of their papers. The lectures (and papers) vary in difficulty but in general each one is addressed to persons with scientific training and experience who are not specialists in the subject of the lecture. When printed, the lecture texts are often revised and are supplemented by brief biographical sketches of the authors, literature references, and illustrations.

BOYNTON HOLMES editor

The beginnings of modern science scientific writings of the 16th, 17th and 18th centuries. New York Published for the Classics Club by Walter J Black, 1948 634 p illus. 19 cm. $3 12 3

Contents (*abridged*) Foreword, by Harvey Bruce Lemon. Matter and motion. Light, heat, and fire. The study of air and of chemistry Electricity The earth and its waters. How plants grow The structure of the human body The science of healing Scientists think about science. Index.

Note: A well-chosen anthology of significant writings in the development of the sciences. Within each of the sections the chosen selections are arranged chronologically Most of the selections are short and in language that the educated layman can readily understand. Concise accounts of the influence of each author upon science are included.

BUSH VANNEVAR

Endless horizons. Introduction by Dr Frank B Jewett. Washington D C. Public Affairs Press, 1946 182 p 23 cm $2.50 4

Contents. The inscrutable past. As we may think. A program for tomorrow The war against disease. The public welfare. Renewal of scientific talent. Reconversion opportunities. The means to the end. Research on military problems. The control of atomic energy Research and the war effort. The teamwork of technicians. The qualities of profession Our tradition of opportunity The need for patent reforms. Science for world service. The builders.

Note: A collection of essays and addresses, most of which were published or delivered in 1945 Six of them are reprinted from the author *Science, the endless frontier* report to the President, Washington, D C., 1945. All of the volume is worth reading, but the most important parts deal with the role of research in the United States during World War II, and proposed program for the support of scientific research by the national government in peacetime The author was the Director of the Office of Scientific Research and Development during World War II.

CANNON WALTER BRADFORD, AND RICHARD M FIELD

International relations in science a review of their aims and methods in the past and in the future. Waltham, Mass. Chronica Botanica Co., 1945 44 p 25 cm. (Chronica Botanica. Vol. 9 no 4) Paper $7.50 5

Contents. Part I, Introduction Reasons and authority for the memorandum, including the methods used in obtaining the essential data. Part II, Scope and area of the replies to the questionnaire. Part III, Digest of the replies to the questionnaire. Part IV Summary of majority and minority opinions. Part Conclusions and recommendations. Appendices.

Note A digest of information concerning the organization, methods, and activities of international scientific unions as they existed in 1944 The material is based on replies to questionnaires which were sent to all available officers of international scientific unions and which stressed their post-war activities and future plans.

COHEN I BERNARD

Science, servant of man a layman s primer for the age of science. Boston Little, Brown and Company 1948 362 p. illus. 21 cm. $4.00 6

Contents (*abridged*) Part I, The nature of the scientific enterprise Conditions of scientific discovery The "happy accident" and its consequences. The spectrum of scientific activity Part II, Practical applications of fundamental research Amines and agriculture. The electric current and radio Synthetic rubber and nylon. Part III, Fundamental research in which practical application seems likely: Blood groups and blood transfusion. The story of hybrid corn. The fortune at the rainbow's end. Part IV Practical innovations based on existing fundamental knowledge Microfilm and oil prospecting The solar corona and radio communication. Part Science, servant of man. How to get the most out of science. Bibliography Index.

Note In this interesting and well-written book the "good" of fundamental scientific research is demonstrated by recounting the origins and development of some of the important applications of scientific knowledge that we now enjoy In most of the cases it is shown that the original investigation was undertaken with no other motive than to add to the sum of human knowledge. Also, it is shown that considerable time usually elapses between the original discovery and its practical application and that in this interval number of scientists usually make contributions that increase the knowledge of the fundamental principles involved The author's main purpose is to convince the general reader that pure science

does eventually add to his well-being, and collateral aim is to explain the methods of basic scientific research. The book can be read with profit by both layman and scientist.

CONANT, JAMES BRYANT

On understanding science an historical approach. New Haven Conn. Yale University Press 1947 145 p illus. 21 cm. (The Terry lectures) $2 00 7

Contents. The scientific education of the layman. Illustrations from the 17th century "touching the spring of the air Illustrations from the 18th century concerning electricity and combustion. Certain principles of the tactics and strategy of science. Notes and bibliographies Index.

Note The slow rate at which the methods and discoveries of modern science are assimilated into the cultural pattern of the non-scientist is matter of deep concern to students of present-day society In this book, the President of Harvard College discusses proposed college course that would be planned for students who will enter such professions as law teaching, politics, writing, and business, the purpose of the course being to give such students an understanding of the scientific method. Thus the work is addressed primarily to educators, but there is much in it for any reader interested in the social implications of science. The text was first delivered as lectures at Yale University on the Dwight Harrington Terry Foundation.

GAMOW, GEORGE

One two three infinity facts & speculations of science. Illustrated by the author New York The Viking Press 1947 340 p illus. 22 cm. $4 75 8

Contents Part I, *Playing with numbers:* Big numbers. Natural and artificial numbers. Part II, *Space, time & Einstein* Unusual properties of space. The world of four dimensions. Relativity of space and time. Part III, *Microcosmos* Descending staircase. Modern alchemy The law of disorder. The riddle of life. Part IV *Macrocosmos:* Expanding horizons. The days of creation. Index.

Note At first glance this book appears to be miscellany However, the fact that the chapters could be easily classified as essays on topics in mathematics, physics, astronomy and biology is beside the point, for the purpose of the book is to impart knowledge about modern science as whole. It can be read either as supplement to the author's *The birth and death of the sun,* 1940, 238 p., and *Biography of the earth,* 1941, New York The Viking Press, 242 p., or separately The author's style is intriguing, humorous and easy to understand. If some parts of the work (for example, "The law of disorder") require more concentrated thinking than one expects in popular book, that is the fault of the subject rather than the diction. The author's own drawings contribute clarity and humor

GEORGE WESTINGHOUSE CENTENNIAL FORUM

Science and life in the world sponsored by the Westinghouse Educational Foundation, Pittsburgh, Pennsylvania. New York Whittlesey House, McGraw Hill Book Company Inc., 1946 3 v illus. 23 cm. Vol. I, $3.50 Vol. II $4 00 Vol. III $3 75 complete set, $10.00 9

Contents (abridged) Volume I, Science and civilization Scientific ethics, by A. V Hill. The social composition of scientific power, by Isaiah Bowman. Planning in science, by Vannevar Bush. The future of atomic energy: A future for atomic weapons, by J. Robert Oppenheimer Atomic energy for power by Enrico Fermi The future of atomic energy from the viewpoint of biology and medicine, by W Edward Chamberlain. Nuclear science in chemistry by Hugh S. Taylor Index. Volume II, Transportation—a measurement of civilization Aviation phase, by Edward Warner Ships and shipping, by Emory S. Land. Rail transportation and its vital contribution to civilization, by Martin W Clement. The new American way of life, by C. F Kettering. Transportation planning in urban areas, by Harland Bartholomew Light, life, and man Peacetime implications of biological warfare, by George W Merck. Light and life—photosynthesis, by Cornelis B. Van Niel. High-frequency radiation and the gene, by Selman A. Waksman Molecular architecture and biological reactions, by Linus Pauling. Index. Volume III, A challenge to the world. Science and civilization, by Gwilym A. Price. Partners in science, by L. W Chubb Horizons in communications, by Frank B Jewett. The golden age of the future, by A. W Robertson. Electric power—the foundation of industrial empire, by Charles W Kellogg. Scientific progress—insurance against aggression and depression, by Karl T Compton. The theater of the stars, by Arthur L. Draper. The micro-zoo, by Peter Gray Symmetry in nature, by E. K. Wallace. A trip through Mellon Institute, by Edward R. Weidlein. Science salvation or destroyer of mankind?—a transcript of the Town Meeting broadcast. George Westinghouse, 1846–1914 by Louis M. Stark. Index.

Note These volumes contain the addresses given by twenty-four leaders in science and technology at the Westinghouse Centennial Forum held at Pittsburgh in May 1946. They constitute review of some of the things that science has brought about, and cautious prophecies of how it may further influence the course of civilization and are addressed to non-specialists. Photographs and biographical sketches are given for most of the scientists represented.

GOUDSMIT, SAMUEL

Alsos. New York Henry Schuman, Inc. 1947 259 p illus 21 cm. $3.50 10

Contents: Foreword. The fear of German atom bomb. W prepare to investigate German science. The need for secrecy Operation Cellastic. Operation Toothpaste. Operation Jackpot. W meet some German colleagues. The breakthrough. Operation Humbug. Hirohito and the German scientists. The misorganization of German science. The Uranium Club. The Gestapo in science. The efficiency of German industry It can't happen here. Appendix: An outline of the uranium problem. Index.

Note Dr Goudsmit was one of the leaders of the team of American scientists who followed after the invasion armies in an attempt to determine the extent of German progress toward an atomic bomb. This is an informal account of this mission (which was known as *Alsos*) written for the layman and virtually devoid of technical details. It is the author' aim to point out how Nazi doctrines and philosophy so shackled and hampered atomic research as to make success impossible. Dr Goudsmit was personally acquainted with several f the top-ranking Nazi scientists and spends much time discussing their personalities and the roles they played in the German failure.

MEES CHARLES EDWARD KENNETH

The path of science with the cooperation of John R. Baker New York John Wiley & Sons Inc., 1946 250 p illus. 22 cm. $3.00. 11

Contents The interpretation of history The bulk of history The method of science. The development of the scientific method. The growth of physical ideas. The growth of chemical ideas. The growth of biological ideas, by Dr John R. Baker The production of scientific knowledge. Applied science and industrial research. The path of science. Index.

Note A thought-provoking outline of the beginnings and development of scientific knowledge and of its effects upon society The main emphasis is upon biological, chemical, and physical knowledge, and no attempt is made to give accounts of all the sciences. The rate of scientific discoveries is compared to an autocatalytic reaction that proceeds faster and faster as more knowledge is accumulated. The author' position as Vice President in Charge of Research of the Eastman Kodak Company lends special interest to his views on the organization and importance of industrial research. Most of the book was delivered as lectures at the University of California in 1943

NATHANSON JEROME, editor

Science for democracy edited with an introduction, by Jerome Nathanson. New York King's Crown Press 1946 170 p 23 cm. (Conference on the Scientific Spirit and Democratic Faith 3rd, New York 1945) $2.50 12

Contents Introduction, by Jerome Nathanson. Science in the national economy Science and human welfare, by Paul R. Sears. The scientific spirit and economic dogmatism, by Jerome Frank. The gentlemen talk of science, by Robert S. Lynd. The challenge of science to social thinking Freedom and abundance, by Kirtley F Mather Psychiatry comes of age, by John A. P Millet. Challenge and response, by Gerald Wendt. Does private industry threaten freedom of scientific research? The role of science in the determination of democratic policy

Note: The first two sections of this volume publish papers presented at the third annual Conference on the Scientific Spirit and Democratic Faith held in New York in May 1943. The third section comprises the verbatim transcript of two symposia held at the same Conference under the chairmanship of Arnold Dresden and Sidney Hook in which 26 educators, ministers, and writers participated. Their common focus was the problem of making the scientific habit of mind an integral part of the democratic process.

NATIONAL RESEARCH COUNCIL

Handbook of scientific and technical societies and institutions of the United States and Canada. Fifth edition. United States section compiled for the National Research Council of the United States by Callie Hull Canadian section compiled for the National Research Council of Canada by S J Cook and J R. Kohr Washington D C. National Research Council, National Academy of Sciences, 1948 371 p 25 cm. (National Research Council. Bulletin no 115) $5 00 13

Contents: United States. Scientific and technical societies. Canada: Scientific and technical societies. Indexes: United States, Canada.

Note: (8) The fact that this directory has undergone five revisions since 1927 is an indication of its usefulness and value as reference tool. Its purpose remains the same, that is to serve as "a directory of those societies, associations, and similar organizations in the natural sciences and related fields that contribute to the advancement of knowledge through their meetings, publications, and other resources. This edition provides information concerning officials, history purpose, membership meetings, library, research, and publications for 1,302 organizations in the United States and 146 in Canada. The personnel index found in the 1942 edition has been omitted.

NATIONAL RESEARCH COUNCIL

Scientific, medical, and technical books published in the United States of America 1930–1944 a selected list of titles in print with annotations Edited by R. R. Hawkins prepared under the direction of the National Research Council s Committee on Bibliography of American Scientific and Technical Books. Washington National Research Council, 1946 1114 p. $20.00 13a

Contents: Science. Mathematics. Astronomy. Physics. Meteorology Chemistry Geology Oceanography Natural history Biology Botany Zoology Man. Human anatomy Physiology Biochemistry Bacteriology Medicine. Gynecology and obstetrics. Surgery Dentistry Aviation medicine. Industrial medicine. Military and naval medicine. Public health. Nursing. Hospitals. First aid. Personal hygiene. Psychosomatic medicine. Psychiatry Mental hygiene. Psychology Engineering. Civil engineering. Sanitary engineering Mechanical engineering. Electrical engineering. Chemical engineering Applied chemistry Heat and power engineering Mining engineering. Metallurgy and metallography Shipbuilding Marine engineering. Navigation. Aeronautics. Photography Food technology Miscellaneous technology Industrial management. Time and motion study Safety engineering. Agriculture. Forestry Forest products. Firearms. Military science. Naval science. Appendix. Author index. Subject index.

Note: Approximately 6,300 books, issued by about 400 publishers, are described in this classified bibliography The entries furnish not only the usual bibliographical information, but also publisher's price, table of contents, and supplementary annotation. Only works of citizens of the United States and Canada are included, and the books of Canadian authors have been listed only when published in the United States. Although planned chiefly for use abroad, the volume is equally useful to librarians and booksellers in the United States. The subject and author indexes are unusually full, the latter containing over 11,000 entries for authors, joint authors, authors of papers in collected volumes, selected series and titles.

O'NEILL, JOHN JOSEPH

You and the universe what science reveals. New York Ives Washburn, Inc. 1946. 328 p. 22 cm. $3.50. 14

Contents: Foreword What science reveals. Book One Of man: Anthropology—lords of creation. Archaeology—the old Adam. Zoology—the lower forms. Biology—science of life Physiology—the universe within. Medicine—the will to live. Psychology—mind over mind. Book Two, Of the universe Climate—world almanac. Geology—the earth below Mathematics—the sum of things. Physics—mind over matter. Electricity—what is it? Engineering and chemistry—alloys, heat, energy Astronomy—the heavens proclaim. Index.

Note: A panoramic review for the layman of recent developments in many fields of scientific research. Each chapter is comprised of articles selected from those published during the past ten years in the New York *Herald Tribune* of which the author is Science Editor

SHAPLEY, HARLOW AND OTHERS

Readings in the physical sciences edited by Harlow Shapley, Helen Wright and Samuel Rapport. New York Appleton-Century Crofts Inc., 1948 501 p Illus. 24 cm. $3 00 15

Contents (abridged) Part One, Science and scientific method. Part Two, Astronomy Part Three Geology Part Four Mathematics. Part Five, Physics. Part Six, Chemistry Index.

Note: In the words of the editors, the material in this volume has been selected "to give the reader some understanding of the physical world as revealed by science, some idea of the habits of thought which have built the edifice of modern science, and some conception of how these habits can be used to solve many of the complex problems, scientific or otherwise, of contemporary living. There are fifty-eight papers and excerpts which have been chosen from the writings of eminent scientists, engineers, and interpreters of science, ranging from Galileo to George W Gray However most of the selections are from writings published in the present century A bibliography of additional reading is part of each section. The book is designed to aid in the orientation of college freshmen and it will appeal to some general readers also.

SHAPLEY HARLOW AND OTHERS, editors

A treasury of science. Edited by Harlow Shapley Samuel Rapport, and Helen Wright. With an introduction by Dr Shapley Enlarged edition with a complete new section on atomic fission. New York Harper & Brothers, 1946 772 p. 22 cm. $4.50 16

Contents: Preface. Preface to the new edition. Introduction. Science and the scientist. The physical world A. The heavens. B. The earth. C. Matter energy physical law The world of life: A. The riddle of life. B The spectacle of life. C. The evolution of life The world of man A. From ape to civilization. B. The human machine. C. The conquest of disease. D Man's mind. Atomic fission.

Note: (43) The enlarged edition of this anthology differs from the original edition of 1943 principally in the extension from ten pages to twenty-five pages of the Jeans selection entitled "Exploring the atom and the addition of six selections, total of eighty-two pages, under the heading Atomic fission, taking the place of the section entitled "Man's future. The book is intended for the person wanting an anthology comprising all branches of modern science. It consists of 75 chapters by various scientists and scientific writers, and forms comprehensive survey of the status of mid-twentieth century science. The authorship and date of each of the contributions are indicated.

STEELMAN JOHN ROY

Science and public policy a report to the President, by John R. Steelman Chairman The President's Scientific Research Board. Washington D C. Government Printing Office, 1947 5 v Illus. 23 cm. Paper Vol. 1 $0.20 Vol. 2 $0.55 Vol. 3 $0.55 Vol. 4 $0.35 Vol. 5 $0.25 17

Contents (abridged) Volume one, A program for the nation. Science and the national interest. Manpower the limiting resource. A national science program. The Federal science program. Personnel problems in science. Volume two, The Federal research program: Program statements: Department of the Treasury War Department. Department of the Navy Department of the Interior Department of Agriculture. Department of Commerce. Federal Loan Agency Federal Works Agency Atomic Energy Commission. National Advisory

Committee for Aeronautics. Smithsonian Institution. Tennessee Valley Authority. Other agencies. Appendices: Survey procedure. Survey forms. Statutory basis of the Federal programs. Volume three, Administration for research. Policy and program formulation. Departmental organization. Administration in scientific bureaus and laboratories. Planning and evaluating research activities. Scientific personnel—policy and practice. Appendices: Research and development units of the United States government. The administration of research: selective bibliography. Volume four, Manpower for research. The crisis of science in the United States. Training more scientists in 1947. Appendices: Sources of statistical data. The present effectiveness of our schools in the training of scientists. Opinions on science teaching. Bibliography on scientific personnel. Volume five, The nation's medical research. Part I, Problems of medical research: Methods of financing medical research. Medical research personnel. Part II, Federal program and problems. Part III, Conclusions and recommendations—a summary

Note The postwar status of scientific research on a national scale is surveyed in this comprehensive report. The author in the preparation of the report had the advice and counsel of the President's Scientific Research Board, of which he was Chairman. The report gives his findings on Federal research programs, on non-Federal research and development and training facilities, and on the interrelation of Federal and non-Federal research and development. It presents also recommendations for coordinating the Federal program for greater efficiency and other recommendations for more effective use of national scientific resources. The investigations included the physical and biological sciences, but not the social sciences.

STUDIES AND ESSAYS in the history of science and learning offered in homage to George Sarton on the occasion of his sixtieth birthday 31 August 1944 Edited by M F Ashley Montagu New York Henry Schuman 1946 594 p illus 24 cm. $12.00 18

Contents. Biographical data on George Sarton. Andreas Vesalius Bruxellensis—The bloodletting letter of 1539 by John B. deC. M. Saunders and Charles D. O'Malley. A word on the philosophic background of Vesalius, by Charles Singer. Leonardo Da Vinci—military engineer by Bern Dibner. Dr. William Croone on generation, by F. J. Cole. Buffon and the Royal Society of London, by Harcourt Brown. The discovery of sex-influenced, sex-limited and sex-linked heredity by Conway Zirkle. The strange case of Wells' theory of natural selection (1813)—some comments on the dissemination of scientific ideas, by Richard Harrison Shryock. Material concerning James Joseph Sylvester, by Raymond Clare Archibald. Analogy in the history of science, by Agnes Arber. Suggestions for the better correlation of literature and science, by M. F. Ashley Montagu. Positivism and the technocratic ideal in the XIXth century by Giorgio de Santillana. Ethnogenesis, by Chauncey D. Leake. Galileo' Platonism, by Ernst Cassirer. Helmholtz' theory of knowledge, by Victor F. Lenzen. Humanism and the history of language, by Grant McColley. On the infinite number of infinite orders, by Fred Schrecker. L'idée du cycle éternel dans l'histoire du monde, by J. Delevsky. Augustine of Londres on comets, by Lynn Thorndike. An unsuspected place of the movements, by Dorothea Waley Singer. Un traité de almanaques probablemente de R. Abraham Ibn Ezra, by José M. Millás Vallicrosa. The "metonic cycle" in Babylonian astronomy. Studies in ancient astronomy IV by Otto Neugebauer. A few notes on Egyptian and Babylonian mathematics, by Solomon Gandz. Synapiegrafia by Ananda K. Coomaraswamy. Grammar Chinese, by James R. Ware. Maps of the Missouri river before Lewis and Clark, by Aubrey Diller. Rôle of the intellectual in public bureaucracy by Robert K. Merton. Biography of George Green, mathematical physicist of Nottingham and Cambridge 1793–1841 by H. Gwynedd Green. The sacred order, by May Sarton.

TRELEASE SAM FARLOW

The scientific paper, how to prepare it, how to write it a handbook for students and research workers in all branches of science. Baltimore The Williams & Wilkins Company 1947 152 p. illus. 19 cm. $2.00 19

Contents (abridged) First steps in treating scientific data. Outline of a scientific paper. Writing the paper. Making the paper interesting. Punctuation. Revision of the manuscript. Preparation of the typewritten copy. Footnotes. Use of the library for research purposes. Literature citations. Preparation of an analytical table of contents. Illustrations. Proofreading. Bibliography. Index.

Note The author has packed into this little volume suggestions and practical information which will be of assistance to writers of scientific papers and reports. Although intended primarily for the guidance of college and university students who are preparing theses or dissertations, the material is of value also to research workers in various scientific fields. Three earlier editions of the book were published under the title *Preparation of scientific and technical papers.*

VISHER, STEPHEN SARGENT

Scientists starred, 1903–1943 in "American men of science" a study of collegiate and doctoral training birthplace, distribution, backgrounds, and developmental influences. Baltimore The Johns Hopkins Press, 1947 556 p illus. 23 cm. $4.50 20

Contents: Introduction. Summary chiefly graphical. Lists of the starred scientists. Collegiate training of the starred scientists. Doctoral training of starred scientists. Other academic training and extent of schooling. Age of scientists when starred. Birthplaces of starred scientists. Distribution of starred scientists by place of work. Home backgrounds and judgments deduced from questionnaire returns. Summary and conclusions. Index.

Note An analysis of data concerning some 2600 men and women distinguished for notable research in certain fundamental sciences. The study covers a 40-year period dating from 1903 when Professor Cattell in his *American men of science* introduced the practice of starring leading research workers in 12 sciences he had arbitrarily chosen. The scientists whose achievements have won this special recognition have been selected impartially by their professional colleagues. The author's long standing interest in starred scientists has resulted in his writing numerous magazine articles from some of which he has incorporated material in the present study. Here he has tabulated and analyzed major factors in the scientists' careers to discover what conditions correlate with their productivity. His purpose has been to ascertain, if possible, methods by which young scientists can most adequately be helped to high achievement.

WEAVER WARREN, editor

The scientists speak. New York Boni & Gaer 1947 369 p. 22 cm. $3.75 21

Contents. Science and complexity. The science of the earth. The science of the sky. The science of new materials and improved processes. New instrumental techniques—new chemicals. Atoms and molecules. Physics and mathematics. Chemistry and living things. Plants and animals. Fundamental biology. The science of nutrition. Science and health. The natural and the social sciences. Science and the war. The long-term values. Bibliography

Note. Many thousands of radio listeners have heard the popular talks on science that are given during the intermission periods of the New York Philharmonic Symphony broadcasts sponsored by the United States Rubber Company. The talks are made by outstanding American scientists and cover a wide variety of topics. About seventy-five of these have been collected into this volume. They are printed as delivered, but the editor of the volume has written introductory notes to the fifteen chapters into which the book is organized, and a bibliography of pertinent books and articles has been added for persons who wish to read further

DICTIONARIES

BRAY ALEXANDER, compiler and editor

Russian-English scientific-technical dictionary New York International Universities Press, 1945 550 p 24 cm. $10.00. 22

Note The English equivalents of approximately twenty-five thousand Russian scientific and technical words and phrases are given in this dictionary. New terms and older basic terms are both included. Definitions are extremely brief, and no examples of usage in sentences are included. The book is included here not for its excellence, but because the scarcity of such dictionaries gives usefulness to practically any such work that includes more than a few terms.

DE VRIES LOUIS

German English science dictionary for students in chemistry physics, biology agriculture, and related sciences with the collaboration of members of the Graduate Faculty Second edition revised and enlarged. New

York McGraw Hill Book Company, Inc., 1946 558 p 18 cm. $4 50 — 23

Note: The first edition of this compilation is well known to science librarians and translators. In this second edition, the dictionary proper has been enlarged by sixty-four pages, representing approximately 6,000 additional terms. Other new material includes list of geographical names and terms derived from them, tables of the elements, measurements and conversion factors. Both the list of reference works and the list of abbreviations have been expanded and improved. As the change in the title indicates, more chemical terms have been included, but the work still contains well-rounded list of scientific and technical terms without marked specialization in any one branch.

VAN NOSTRAND'S SCIENTIFIC ENCYCLOPEDIA aeronautics astronomy botany, chemical engineering chemistry, civil engineering electrical engineering, electronics & radio geology, mathematics mechanical engineering medicine, metallurgy meteorology mineralogy navigation photography physics statistics zoology Second edition. New York D Van Nostrand Company Inc. 1947 1600 p illus. 26 cm. $15.00 — 24

Note (11) The second edition of this excellent reference book follows the same basic plan as the original edition. The more than 11,000 terms are arranged in one alphabet regardless of the field to which they pertain. Definitions range from only few lines for such terms as "mole cricket" to two or more pages on such topics as "radar." Definitions and articles are signed. A fair amount of illustrative matter and tabular data is included. This edition contains much new material on such topics as the atomic bomb, radar, the supercharger the jet engine, rocket flight, sound recording, and plastics. Although the number of terms has been increased by only 1,000, the number of new terms is greater than this because some that appeared in the first edition have been dropped. The number of pages has been increased by 144. On the whole, the revision has been well done. It is, of course, easy to pick flaws such as the listing of the disease, shingles, under herpes zoster with no cross reference from the first term, and the lack of cross reference under heat pump to the information about this device on page 696; but there are few reference books without faults of this kind.

HISTORY

BATES, RALPH SAMUEL

Scientific societies in the United States. A publication of the Technology Press Massachusetts Institute of Technology New York John Wiley & Sons Inc. 1945 246 p. 22 cm. $3.50 — 25

Contents: Scientific societies in eighteenth century America. National growth, 1800-1865. The triumph of specialization, 1866-1918. American scientific societies and world science, 1919-1944 The increase and diffusion of knowledge. Bibliography Index.

Note A history of the growth of scientific societies in the United States, from the founding of the American Philosophical Society in 1727 by Benjamin Franklin to the establishment of such recent agencies as the Office of Scientific Research and Development and the National Roster of Scientific and Specialized Personnel. It is based on publications of the societies and secondary sources such as biographies and memoirs. A final chapter discusses the relation of these societies to scientific workers and to the general public. An extensive bibliography is included.

COHEN, MORRIS RAPHAEL AND I E DRABKIN

A source book in Greek science. New York McGraw Hill Book Company Inc. 1948 579 p illus. 24 cm. (Source books in the history of the sciences, Gregory D Walcott, general editor) $9 00. — *26*

Contents (abridged) Mathematics. Astronomy and mathematical geography Astronomy Mathematical geography Physics Chemistry and chemical technology Geology and meteorology Biology Medicine. Physiological psychology Some important books on Greek science. Index of names.

Note. A substantial collection of extracts from the extant Greek literature pertaining to science and technology The authors have limited it to material based in principle either on mathematics or on empirical observations, and thereby have excluded philosophy astrology etc. The purpose is to present for students of science and of civilization selection of the Greek writings which are related, at least in spirit, to modern science. All of the passages are given in English translation and are accompanied by references to the sources. A large proportion of the text has been reprinted from standard translations of Greek authors, but considerable portion is here presented in English for the first time. The editors have added helpful prefaces and numerous scholarly footnotes.

HORNBERGER, THEODORE

Scientific thought in the American colleges, 1638-1800 Austin Texas The University of Texas Press, 1946 108 p illus 24 cm. (University Research Institute. Project no 67) Paper $1 00 cloth $1 50 — 27

Contents: Values in the history of science. The first American colleges. Entrance requirements. The curriculum. Teachers, methods, and textbooks. Libraries. The effects. Notes. Index.

Note A carefully documented study of the attitude of early American colleges toward science and scientific thought as based on study of the extant records of eight colleges which were functioning before 1780. The colleges discussed are Harvard, Yale, Brown, Dartmouth, Columbia, Princeton, Pennsylvania, and William and Mary The final chapter examines the opposition to science as it was voiced by outstanding men of the period.

MCKEEHAN LOUIS WILLIAMS

Yale science the first hundred years, 1701-1801 Issued in connection with the centennial anniversary of the Sheffield Scientific School, Yale University 1847-1947 New York Henry Schuman 1947 82 p 19 cm. (Yale University School of Medicine. Historical Library Publication no. 18) $2.50 — 28

Contents. Preface, by Theodore Hornberger. Pierson—Johnson, 1701-1738 Clap—Stiles—Strong, 1739-1769. Strong—Stiles—Meigs, 1770-1801 Conclusion. Notes. Index.

Note A brief, but carefully documented review of the rather faltering scientific interests and activities at Yale College [now Yale University] during its first century It serves well as background to J F Fulton and E. H. Thomson's *Benjamin Silliman, 1779-1864* New York: Schuman, 1947

SARTON GEORGE

Introduction to the history of science. Vol. III (In two parts) Baltimore Published for the Carnegie Institution of Washington by the Williams & Wilkins Company 1947 2 v in 3 26 cm. (Carnegie Institution of Washington. Publication no 376) $20 00 — 29

Contents (abridged) Introductory chapter Part I, The time of Abū-l-Fidā Levi ben Gerson, and William of Occam (first half of the fourteenth century) Survey of science and intellectual progress. Religious background. The translators. Education. Philosophical and cultural background. Mathematics and astronomy Physics, technology and music. Chemistry Geography Natural history Medicine. Historiography Law and sociology Philology Part II, The time of Geoffrey Chaucer, Ibn Khaldūn, and Hasdai Crescas (second half of the fourteenth century) Survey of science and intellectual progress. Religious background. The translators. Education. Philosophical and cultural background. Mathematics and astronomy Physics, technology and music. Chemistry Geography Natural history Medicine. Historiography Law and sociology Philology Addenda. General bibliography Indexes: General index. Greek index. Chinese and Japanese index.

Note. (15) A monumental reference work which gives for each epoch condensed survey of the developments in the various branches of learning, brief biographical and critical sketches of the

most important men, and references to the principal texts of their works and to the principal critical studies. Owners of Volumes and II should note the corrections and addenda that are contained in the preface of this one.

SARTON, GEORGE

The life of science essays in the history of civilization. Foreword by Max H Fisch. New York Henry Schuman 1948 197 p 22 cm. (The life of science library) $3.00 30

Contents (abridged) Foreword, by Max H. Fisch. Part One The spread of understanding. The history of medicine versus the history of art. The history of science. Part Two Secret history Leonardo and the birth of modern science. Evariste Galois. Ernest Renan. Herbert Spencer Part Three East and West in the history of science Part Four Casting bread upon the face of the waters An institute for the history of science and civilization. Casting bread upon the face of the waters. Editorial note, acknowledgments, and sources. Index.

Note. Dr Sarton, the outstanding historian of science, is best known for his monumental *Introduction to the history of science* (see Index) This collection of essays has been selected and adapted from his writings which have appeared in scholarly and scientific journals over a period of thirty years. They are written for the general reader and have one common purpose—to provide him with an understanding of the scope, purpose, and methods of the study of the history of science.

STRUIK DIRK JAN

Yankee science in the making. Boston Little Brown and Company 1948 430 p. 23 cm. $5 00 31

Contents. Part One, Beginnings: The colonial setting. Part Two, The Federalist period The revolutionary years. The practical navigators. Turnpike and towpath. The beginnings of mass production. Lecture hall and textbook. Part Three, the Jacksonian period The surveys. Humanists and transcendentalists. Steam, water electricity The great naturalists. Science and religion. Sky and ocean. The scientific schools. Notes. Bibliography Index.

Note A thorough but somewhat pedestrian study of the development of science and technology in the northeastern region of the U S especially New England, from its beginnings up to the time of the American Civil War. The author has taken a broad view of the subject and has treated it from the sociological viewpoint. There is much on the background of the inventions of the period and on their social effect, but almost nothing on their mechanical details or principles. The text is carefully documented with both notes and a bibliography The latter, which runs to thirty pages, includes books and pamphlets, but only a few periodical articles and no references to the early patents.

TEXTBOOKS

CABLE, EMMETT JAMES AND OTHERS

The physical sciences by Emmett James Cable Robert Ward Getchell and William Henry Kadesch. Second edition New York Prentice-Hall, Inc. 1947 684 p illus. (part col d) $5.65 32

Contents (abridged) The dawn of science. Weights and measures. Force and motion. Building stones of matter The behavior of molecules. Heat as a form of energy Our atmosphere. Winds and weather Sound Illumination. Color. Spectra. Electrostatics and magnetism. Electric currents. Electrical communication. Some fundamental chemical processes. Some common metals. Organic and food chemistry The earth and its rocks. Ground water and its work. Earthquakes and volcanism. Our starry galaxy Our solar family Latitude, longitude, and time. Science and the world of tomorrow Index.

Note: (44) This is a well-integrated survey of physics, meteorology chemistry geology and astronomy written in a pleasing, easily-read style. Its non-mathematical treatment makes it suitable for use in a course for the liberal arts student or for the general reader. In this edition the bibliographies have been brought up to date, new illustrations have been added, and much of the text has been rewritten and expanded to include advances made since 1944.

GRAY DWIGHT E.

Man and his physical world. Second edition. New York D Van Nostrand Company Inc. 1946 699 p illus. 23 cm. $4 75 33

Contents (abridged) Science and the scientific method. Man and the universe The solar system. The universe beyond the solar system. Astronomical measurements. Man and the history of the earth Factors which change the surface of the earth. Geological history Man and the tools of science Units of measurement. Man and materials The nature of matter Air and water. Metals and alloys. Synthetics. Man and energy: Force, work, and power Heat engines. Magnetism. Electricity and the atom. Electronics. Wave motion. Sound. Light. Man applies science: Communication. Illumination. Reading list. Index.

Note A textbook intended for use in "science survey" courses offered to college students who do not plan to study further in a scientific field. Like other books of the type, it is intended to give the student an appreciation of the basic principles, the methods, and some of the applications of the physical sciences. No previous knowledge of mathematics or science is assumed, hence the book can be understood by interested lay readers as well. New material in this edition includes accounts of technological developments such as radar during World War II.

KRAUSKOPF KONRAD BATES

Fundamentals of physical science an introduction to the physical sciences. Second edition. New York McGraw Hill Book Company Inc., 1948 676 p. illus. (part col d) 24 cm. $4 50 34

Contents (abridged) Part I, The solar system. Part II, Matter and energy Part III, The structure of matter Part IV Fundamental processes. Part V The biography of the earth. Part VI, Stars and galaxies. Appendix. Index.

Note. (34) A presentation of the fundamentals of physics, chemistry astronomy and geology as a unified field of knowledge. The language is simple with a minimum of technical terms, and abstract concepts are illustrated by concrete examples of their application. The book is intended chiefly for use in introductory college courses in general science, but it is suitable also for general readers who desire an understandable presentation of science written on this level rather than a strict popularization In preparing the work for this edition errors discovered in the first edition were corrected. Some sections were rewritten to make them clearer and new material was added on such topics as atomic physics and new techniques in weather forecasting.

MATHEMATICS

GENERAL

KEYSER, CASSIUS JACKSON

Mathematics as a culture clue and other essays. The collected works. Volume I New York Scripta Mathematica Yeshiva University 1947 277 p illus 21 cm $3 75 35

Contents: The meaning of mathematics. The bearings of mathematics. Mathematics as culture clue. Scientists teach laymen. The nature of the doctrinal function and its role in rational thought. Mathematics and the science of semantics. A glance at some of the ideas of Charles Sanders Peirce. William Benjamin Smith. Mathematics and the dance of life. Three great synonyms: Relation—transformation—function. Vilfredo Federico Damaso Pareto. Mathematician—economist—sociologist. Panthetics.

Note. A series of essays dealing intimately and lucidly with the philosophical, historical, biographical, didactic and disciplinary aspects of mathematics. The writings were assembled by the author's friends both as tribute to him and in order to make them available for the use and enjoyment of larger groups of readers. The author is Adrain Professor Emeritus of Mathematics in Columbia University.

PARKE NATHAN GRIER III

Guide to the literature of mathematics and physics including related works on engineering science. New York McGraw Hill Book Company Inc. 1947 205 p 23 cm. $5 00 36

Contents: Part I, General considerations: The principles of reading and study. Self-directed education. Literature search. Periodicals. Part II, The literature: Subject headings. Author index. Subject index.

Note: This work is directed to graduate students and other persons who are in need of orientation in the use of books and periodicals. The reader is told in Part what and how to read and how to discover whether information that he needs is to be found in the published literature. In Part II, he is offered selected lists of literature on approximately 150 topics. The lists mainly include books, but some periodical articles are also cited. Material in English predominates, but there are numerous references to publications in foreign languages, especially German. The selection of material is good but the usefulness of the lists is reduced somewhat by the lack of annotations.

POLYA, GEORGE

How to solve it, a new aspect of mathematical method. Princeton N J Princeton University Press 1945 224 p. illus. 20 cm. $3 00 37

Content (abridged) Preface. Introduction. Part I, In the classroom. Purpose. Main divisions, main questions. More examples. Part II, How to solve it. Part III, Short dictionary of heuristic. Appendix.

Note: A stimulating analysis of the problems of problem-solving in science and mathematics. The term "heuristic" is the key to the theme; in other words the book is concerned with methods that enable the student to find out truths for himself. From this viewpoint, the author shows how to analyze problem how to devise an appropriate plan of attack; how to carry out the plan; and how to check the solution. The third part is the major part of the book, and it can best be described as collection of "pointers" —short paragraphs of special information, warnings and suggestions —that will be useful to persons who wish to apply hat they have learned from the preceding parts. Practically all of the illustrative examples are mathematical. The book can be readily understood by lay readers, but its contents appeal also to graduate scientists.

SCHAAF WILLIAM LEONARD editor

Mathematics our great heritage essays on the nature and cultural significance of mathematics. New York Harper & Brothers 1948 291 p 22 cm. $3.50 38

Contents: The creative spirit. Mathematics as an art, by J. W. N. Sullivan. On the reliability of mathematics, by G. H. Hardy. Mathematics—the subtle fine art, by J. B. Shaw. Wellsprings: On the development of mathematics, by E. T. Bell. On the genesis of mathematical ideas, by G. Sarton. On the sociology of mathematics, by D. J. Struik. The queen: An introduction to modern mathematical thought, by C. V. Newsom. On the nature of mathematical truth, by C. G. Hempel. The two realities, by T. Dantzig. The handmaiden: Mathematics and the sciences, by T. Fort. Mathematics and the sciences, by J. W. Lasley Jr. On the relation of mathematics and physics, by R. B. Lindsay. Industrial mathematics, by T. C. Fry. Humanistic bearings: On the nature of mathematical knowledge, Report of the Progressive Education Association. Mathematics and the humanities, by A. Henderson. Mathematics as an intercultural bridge, by A. Dresden. The larger human worth of mathematics, by R. D. Carmichael.

Note. The essays in this book are well-chosen. Laymen who read them will obtain good idea of the nature of mathematics, its cultural importance and few of its more significant applications. Professional mathematicians will find in it many original ideas about their branch of science. For the most part the essays are devoid of mathematical symbols and advanced terminology.

STUDIES AND ESSAYS presented to R. Courant on his 60th birthday January 8 1948 New York Interscience Publishers Inc. 1948 470 p. illus. 25 cm. Paper $5.50 39

Contents: Linear mappings and the existence of normal basis, by E. Artin. Über Mittelwertgleichungen, die mehreren partiellen Differentialgleichungen 2. Ordnung zugeordnet sind, by L. Asgeirsson. The infinity of generalized hyperbolic planes, by R. Baer. Bemerkungen zu den Grundlagen der Geometrie, by P. Bernays. On structure theorems for closed modules in an infinite-dimensional space, by H. Bohr and E. Følner. On the problem of Dido, by H. Busemann. A proof of the first principal theorem on conformal representation, by C. Carathéodory. Current distribution in an frequency synchrotron magnetic field, by E. D. Courant. Kellogg's uniqueness theorem and applications, by G. C. Evans. On probability problems in the theory of counters, by W. Feller. On discontinuous groups of isometric transformations of the non-Euclidean plane, by W. Fenchel and J. Nielsen. Angles between flat subspaces of real n-dimensional Euclidean space, by D. A. Flanders. Remarks about the role of pure science in general education, by J. Franck. Criteria for the discrete character of the spectra f ordinary differential operators, by K. O. Friedrichs. Sur le cas anormal du problème de Cauchy pour l'équation des ondes, by J. Hadamard. Zur Topologie der komplexen Mannigfaltigkeiten, by H. Hopf. Extremum problems with inequalities as subsidiary conditions, by F. John. Remarks on the perturbation formulas of Brillouin and Wigner, by H. A. Kramers. On the convergence of solutions of difference equations, by H. Lewy. Metric methods in binocular visual perception, by R. Luneburg. On some problems involving linearization of aero-thermodynamical equations, by J. K. L. Macdonald. Functions on metric space and setting for isoperimetric problems, by Marston Morse. Arithmetical methods for the dating of Babylonian astronomical texts, by O. Neugebauer. On patterns of plausible inference, by G. Pólya. Discontinuous solutions in the theory of plasticity, by W. Prager. On theorem of Frobenius, by H. Rademacher. Shock systems of circular arrangement in steady compressible flow, by H. Reissner. Das Eigenwertproblem von $\Delta u + \lambda u = 0$, by F. Rellich. Some remarks on the inequality f Tchebycheff, by H. Robbins. Some analytical aspects of the problem of smoothing, by I. J. Schoenberg. Symplectic groups and wall systems, by H. Schwerdtfeger. On the isoperimetric inequality for saddle surfaces with singularities, by M. Shiffman. Indefinite quadratische Formen und Modulfunktionen, by C. L. Siegel. Open convex surfaces which are rigid, by J. J. Stoker. A boundary value problem for hyperbolic differential equation arising in the theory of the non-uniform super-

most important men, and references to the principal texts of their works and to the principal critical studies. Owners of Volumes and should note the corrections and addenda that are contained in the preface of this one.

Sarton George

The life of science, essays in the history of civilization Foreword by Max H. Fisch. New York Henry Schuman 1948 197 p 22 cm. (The life of science library) $3 00 30

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Struik, Dirk Jan

Yankee science in the making. Boston Little, Brown and Company 1948 430 p 23 cm. $5 00 31

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TEXTBOOKS

Cable Emmett James and others

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Note (48) This is well-integrated survey of physics, meteorology chemistry geology and astronomy written in pleasing, easily-read style. Its non-mathematical treatment makes it suitable for use in course for the liberal arts student or for the general reader In this edition the bibliographies have been brought up to date, new illustrations have been added, and much of the text has been rewritten and expanded to include advances made since 1940

Gray, Dwight E

Man and his physical world Second edition New York D Van Nostrand Company Inc., 1946 699 p illus. 23 cm. $4 75 33

Contents (abridged) Science and the scientific method. Man and the universe. The solar system. The universe beyond the solar system. Astronomical measurements. Man and the history of the earth Factors which change the surface of the earth. Geological history Man and the tools of science: Units of measurement. Man and materials The nature of matter Air and water Metals and alloys. Synthetics. Man and energy Force, work, and power. Heat engines. Magnetism. Electricity and the atom. Electronics. Wave motion. Sound. Light. Man applies science Communication. Illumination. Reading list. Index.

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Krauskopf Konrad Bates

Fundamentals of physical science an introduction to the physical sciences. Second edition New York McGraw Hill Book Company Inc., 1948 676 p illus. (part col d) 24 cm. $4.50 34

Contents (abridged) Part I, The solar system. Part II, Matter and energy Part III, The structure of matter Part IV Fundamental processes. Part *The biography of the earth.* Part VI, *Stars and galaxies.* Appendix. Index.

Note (54) A presentation of the fundamentals of physics, chemistry astronomy and geology as unified field of knowledge. The language is simple with minimum of technical terms, and abstract concepts are illustrated by concrete examples of their application. The book is intended chiefly for use in introductory college courses in general science, but it is suitable also for general readers who desire an understandable presentation of science, written on this level rather than strict popularization. In preparing the work for this edition errors discovered in the first edition were corrected. Some sections were rewritten to make them clearer and new material was added on such topics as atomic physics and new techniques in weather forecasting.

inverse functions of complex quantities, probability integral table, and groups of integrals involving $(a + b + 1)^{1/2}$, $\frac{1}{+ b \sin}$ and $\frac{1}{+ b \cos}$.

HARVARD UNIVERSITY COMPUTATION LABORATORY

Tables of the Bessel functions of the first kind of orders zero and one. Cambridge, Mass. Harvard University Press 1947 unpaged. 28 cm. (Harvard University Computation Laboratory Annals. Vol III) $8.00 47

Tables of the Bessel functions of the first kind of orders two and three. Cambridge, Mass. Harvard University Press 1947 unpaged. 28 cm. (Harvard University Computation Laboratory Annals. Vol. IV) $8 00 48

Tables of the Bessel functions of the first kind of orders four five and six Cambridge Mass. Harvard University Press, 1947 unpaged. 28 cm. (Harvard University Computation Laboratory Annals. Vol. V) $8.00 49

Tables of the Bessel functions of the first kind of orders seven eight, and nine. Cambridge, Mass. Harvard University Press, 1946 unpaged. 28 cm. (Harvard University Computation Laboratory Annals. Vol. VI) $8 00 50

Tables of the Bessel functions of the first kind of orders ten, eleven, and twelve Cambridge Mass. Harvard University Press 1947 unpaged 27 cm. (Harvard University Computation Laboratory Annals. Vol. VII) $8.00 51

Tables of the Bessel functions of the first kind of orders thirteen, fourteen, and fifteen. Cambridge, Mass. Harvard University Press 1947 unpaged. 27 cm. (Harvard University Computation Laboratory Annals. Vol VIII) $8.00 52

Tables of the Bessel functions of the first kind of orders sixteen through twenty-seven. Cambridge Mass. Harvard University Press 1948 764 p 27 cm. (Harvard University Computation Laboratory Annals. Vol. IX) $8.00 53

Tables of the Bessel functions of the first kind of orders twenty-eight through thirty nine. Cambridge, Mass. Harvard University Press, 1948 694 p. 27 cm. (Harvard University Computation Laboratory Annals. Vol. X) $8.00 54

Note The tables contained in these volumes were computed on Harvard University's automatic sequence controlled calculator under contract with the United States Navy The tabulation is carried to eighteen decimal places, with wide range of argument and order fine argument interval, and high degree of accuracy previously unobtainable. The tables are reproduced by offset lithography directly from pages typed by typewriters controlled by the calculating machine, thus avoiding errors that might occur in typesetting. The first volume of the series contains an introduction in which the methods of computation are explained. Also in this volume are directions for interpolating in the tables. Eventually the series will be extended to cover the Bessel functions of the first kind up to and including J100 (x).

HARVARD UNIVERSITY COMPUTATION LABORATORY

Tables of the modified Hankel functions of order one-third and of their derivatives. Cambridge Mass. Harvard University Press, 1945 235 p. illus. 27 cm. (Harvard University Computation Laboratory Annals Vol. II) $8 00 55

Contents: Introduction Part I. The modified Hankel functions and their properties. Part II. The method of computation of the functions. Bibliography Tables: The coefficients of the Maclaurin series for $f(z)$, $g(z)$, $f'(z)$, and $g'(z)$. The coefficients in the asymptotic series for $h_1(z)$ and $h_2(z)$. Useful constants. The zeros of $h_1(z)$ and $h_1'(z)$. The functions $h_1(z)$ and $h_2(z)$ for $\Delta x = \Delta y = 0.1$ and $| + i | \leq 6$. The functions $h_1(z)$ and $h_1'(z)$ for $\Delta x = y = 0.1$ and $| + iy| \leq 6$.

Note: A book of mathematical tables for use and convenience in the solution of Stokes' equation in the complex plane. A form of differential equation used in describing simple cases of wave refraction and diffraction. The work was sponsored by the Bureau of Ships of the U S. Navy and was accomplished during World War on the I. B. M. automatic sequence controlled calculator belonging to Harvard University

HODGMAN CHARLES DAVID

Mathematical tables. Ninth edition. Cleveland Chemical Rubber Publishing Co. 1948 390 p. illus. 20 cm. U.S., $1 75 foreign countries $1 95 56

Contents (abridged): Use of mathematical tables. Decimal equivalents of common fractions. Conversion tables. Numerical constants. Five-place logarithms. Logarithms. Natural sines, cosines, tangents, and cotangents. Natural trigonometric functions for angles in degrees and decimals. Logarithms of the trigonometric functions for angles in degrees and decimals. Natural functions for angles in radians. Haversines. Hyperbolic functions. Degrees—radians. Numerical tables—reciprocals, circumferences and area of circles, squares, cubes, and roots. Powers of numbers. Complete elliptic integrals. Differentials Integrals. Algebraic formulas. Statistics Trigonometrical functions in right-angled triangle. Analytical geometry Interest tables. Moment of inertia for various bodies. Abbreviations and symbols of mathematics.

Note The contents of this book are essentially the same as the contents of the mathematical section of the *Handbook of chemistry and physics* (see Index). This format is more convenient for persons who use chiefly the mathematical formulas and tables. A fair number of additions have been made in this edition. These include a fifteen-page table of natural secants and cosecants for angles in degrees and minutes; twenty-two page collection of mathematical abbreviations and symbols; and collection of conversion factors and numerical constants.

LARSEN, HAROLD DANIEL

Rinehart mathematical tables compiled by Harold D Larsen. New York Rinehart & Company, Inc. 1948 264 p 21 cm. $1.50 57

Contents: Part I, Five-place common logarithms of numbers. Natural trigonometric functions. Common logarithms of trigonometric functions. Powers, roots, and reciprocals. Four-place common logarithms of numbers. Natural trigonometric functions for decimal fractions of degree. Common logarithms of trigonometric functions for decimal fractions of degree. Degrees, minutes, and seconds to radians. Natural values of the trigonometric functions for angles in radians. Radians to degrees, minutes, and seconds. Common logarithms of the trigonometric functions for angles in radians. Natural trigonometric functions for selected angles. Common logarithms of factorials. Four-place natural logarithms Values and logarithms of exponential functions. Values of hyperbolic functions. American experience table of mortality Commissioners 1941 standard ordinary mortality table. Construction column. Commissioners mortality table. Amount of 1 at compound interest. Present value of 1 at compound interest. Amount of 1 per annum at compound interest. Present value of 1 per annum at compound interest. Ordinates of the normal probability curve. Areas of the normal probability curve.

Values of F and t. e^{x} probability scale. Part II. Greek alphabet. Weights and measures. Miscellaneous physical constants. Important mathematical constants. Formulas from algebra. Formulas from geometry. Formulas from trigonometry. Hyperbolic functions. Formulas from plane analytic geometry. Formulas from solid analytic geometry. Curves for reference. Derivatives. Indefinite integrals. Definite integrals. Series. Index.

Note: A selection of tables and formulas most frequently used by students and professional workers in the fields of mathematics, physics, and engineering. Particular attention has been given to layout and typography resulting in high degree of legibility. An alternative edition which contains only the first part is available from the same publisher. 160 p., $1.00.

SALZER, HERBERT E

Table of coefficients for obtaining the first derivative without differences. Washington D C Government Printing Office 1948 20 p 27 cm. (United States. National Bureau of Standards. Applied mathematics series 2) Paper $0 15 58

Note: The numerical data presented in these tables were obtained by differentiation of the Lagrangian interpolation formula $f'(x_0 + ph) \sim \frac{1}{hC(n)} \sum_{i=-[(n-1)/2]}^{[n/2]} C_i^{(n)}(p) f(x_0 + ih)$. They give the values of the polynomials $C_i^{(n)}(p)$ for p ranging from $-[(n-1)/2]$ to $[n/2]$. For $n = 4$, 5 and 6, the polynomials are tabulated at intervals of 0 01; for $n = 7$ they are tabulated at intervals of 0 1.

SPENCELEY GEORGE WELLINGTON, AND R. M SPENCELEY

Smithsonian elliptic functions tables Prepared by G W and R. M. Spenceley (Publication 3863) Washington, D C The Smithsonian Institution 1947 366 p 24 cm. (Smithsonian miscellaneous collections. Vol. 109 whole volume) $4.50 59

Contents: Preface. Elliptic functions tables $\theta = 1°$ to $\theta = 89°$. Appendix. Hyperbolic functions. Circular functions.

Note: A series of tables printed in 12 decimal figures presenting values as follows for elliptic functions from $\theta = 1°$ to $\theta = 89°$ and from $u = 0$ to $u = 90$; $u = (v/90)K = F(\phi, k)$, sn u, cn u, dn u, ϕ, $E(\phi, k)$, $A(v)$, $D(v)$.

TURRELL FRANKLIN MARION

Tables of surfaces and volumes of spheres and of prolate and oblate spheroids and spheroidal coefficients. Berkeley and Los Angeles University of California Press, 1946 153 p illus. 22 cm. $2 00 60

Contents: Preface. Introduction. Definitions. Symbols used in tables. Surfaces and volumes of spheres. Surfaces and volumes of spheroids. Surface coefficients for prolate spheroids. Surface coefficients for oblate spheroids. Volume coefficients for prolate spheroids. Volume coefficients for oblate spheroids. Appendices: Derivations of formulas. Curves of and coefficients. Approximate per cent. errors for tables 3, 4, 5, and 6. Index.

Note. The original tables in this book were designed particularly for use in calculating the surfaces and volumes of citrus fruits, but they can be applied also to other fruits, to melons and nuts, and to other geometrically regular bodies approximating these shapes. The tables are constructed so as to facilitate very rapid approximations of the areas and volumes without the necessity for using interpolation and with very small consequent error.

UNITED STATES NATIONAL BUREAU OF STANDARDS MATHEMATICAL TABLES PROJECT

Table of arc sin x prepared by the Mathematical Tables Project conducted under the sponsorship of the National Bureau of Standards. Present volume begun under the auspices of the Work Projects Administration for the City of New York and completed with the support of the Office of Scientific Research and Development. New York Columbia University Press 1945 121 p 27 cm. $3 50 61

Contents (abridged): Bibliography. Table of arc sin x [illegible]. Auxiliary table of $f(x)$. Values of [illegible]. Values of $E_0(\phi)$ and $F_0(\phi)$. Values of $E_0(\phi)$ and $F_0(\phi)$. Conversion tables. Multiples of $\frac{1}{2}\pi$.

Table of the Bessel functions $J_0(z)$ and $J_1(z)$ for complex arguments Second edition. Prepared by the Mathematical Tables Project, National Bureau of Standards. New York Columbia University Press, 1947 403 p 27 cm. $7 50 62

Contents: Contour lines of $J_0(z)$ and $J_1(z)$. Constants. Introduction. Supplementary notes. Bibliography. Table of $J_0(\rho e^{i\phi})$ and $J_1(\rho e^{i\phi})$. Table of Lagrangian interpolation coefficients.

Tables of associated Legendre functions. Prepared by the Mathematical Tables Project, conducted under the sponsorship of the National Bureau of Standards Present volume begun under the auspices of the Work Projects Administration for the City of New York and completed with the support of the Office of Scientific Research and Development New York Columbia University Press, 1945 303 p 27 cm. $5 00 63

Contents (abridged): Bibliography. Table I: $P_n^m(\cos\theta)$ [illegible]. Table II: $\frac{d}{d\theta}P_n^m(\cos\theta)$ [illegible]. Table III: $P_n^m(x)$ [illegible] or exact). Table IV: $\frac{d}{dx}P_n^m(x)$ [illegible] or exact). Table V: $(-1)^m Q_n^m(x)$ [illegible]. Table VI: $(-1)^{m+1}\frac{d}{dx}Q_n^m(x)$ [illegible]. Table VII: $i^{-n}P_n^m(ix)$ [illegible] or exact). Table VIII: $i^{-n}\frac{d}{dx}P_n^m(ix)$ [illegible] or exact). Table IX: [illegible] $Q_n^m(ix)$ [illegible]. Table X: [illegible] $\frac{d}{dx}Q_n^m(ix)$ [illegible]. Table XI: [illegible]. Table XII: $\frac{d}{dx}P$ [illegible]. Table XIII: $(-1)^m Q$ [illegible]. Table XIV: $(-1)^{m+1}\frac{d}{dx}Q$ [illegible]. Supplementary tables. Table XV: Exact values of $P_n^m(\ )$ and $\frac{d}{dx}P_n^m(x)$. Table XVI: Exact values of $P_n^m(x)/(x^2-1)^{m/2}$ and of $\left[\frac{d}{dx}P_n^m(x)\right]/(x^2-1)^{[illegible]}$. Table XVII: Values of $\sqrt{x^2-1}\,P$ [illegible] and of $\sqrt{x^2-1}\frac{d}{dx}P$ [illegible]. Table XVIII: Legendre normalizing factor N. Table XIX: First eleven coefficients in the expansion of [illegible].

Tables of fractional powers. Prepared by the Mathematical Tables Project, conducted under the sponsorship of the National Bureau of Standards. Present volume begun under the auspices of the Work Projects Administration for the City of New York and completed with the support of the Office of Scientific Research and Development. New York Columbia University Press 1946 486 p 27 cm. $7.50 64

Contents: Bibliography. Part I. Values of A^x: Table 1, [illegible]. Table 2, [illegible]. Table 3, [illegible] 1/4, 1/3, 1/2, 2/3, 3/4, and [illegible]. Table 4, [illegible]

[0.001(.001)0.01(.01)0.99; 15D]. Table 5, $A = 10^{-7}P$, P prime between 100 and 1000; [illegible] = [0.001(.001)0.01(.01)0.99; 15D]. Part II, Values of [illegible]; Table 6, [illegible] = ±1/2; x = [0(.01)9.99; 15D]. Table 7 [illegible] = ±1/3, [illegible] = [0(.01)10; 15D]. Table 8, [illegible] = ±2/3, [illegible] = [0(.01)10; 15D]. Table 9, [illegible] = ±1/4, [illegible] = [0(.01)9.99; 15D]. Table 10, [illegible] = ±3/4, [illegible] = [0(.0) 9.99; 15D]. Table 11, [illegible] = [0.01(.01)0.99], [illegible] = [0(.001) various 0(.01)0.99; 7D].

Tables of spherical Bessel functions. Prepared by the Mathematical Tables Project, National Bureau of Standards New York Columbia University Press 1947 2 v 27 cm. Vol. 1 $7.50 Vol. 2 $7.50 65

Contents (abridged): Volume I: Values of $\sqrt{\pi/2x}\,J_n(x)$; [illegible] = ½(1)13½ [x = 0(.01)10(.1)25]; [illegible] = ½ [x = 0(.01)10(.05)10.5(.1)25]. Values of [illegible] $\sqrt{\pi/2x}\,J_n(x)$; [x = 0(.01)[illegible]; [illegible]], [illegible] ≤ [illegible] ≤ 2.50. Values of $E_n(\rho)$ and $F_n(\rho)$, [ρ = 0(.001)1; 7D]. Values of $E_n(\rho)$ and $F_n(\rho)$, [ρ = 0(.001)1; 6D]. Values of $G_n(\rho)$ and $H_n(\rho)$, [ρ = 0(.001)1; 6D]. Volume II: Values of $\sqrt{\pi/2x}\,J_n(x)$; [illegible] = ½(1)½ [= 0(.01)10(.1)25]; [illegible] = ½(1)½ [= 10(.1)25]. Values of $J_n(x)$; [illegible] = ½(1)½(1)½; [x = 0(.1)10; 9D]; [illegible] = ½(1)½ [x = 10(.1) 25; mostly 7S]. Values of [illegible]; [illegible] = ½(1)½; [x = 0(.1)0.5(.05)10(.1)25; mostly 7S]; [illegible] = ½(1)½; [x = 0(.1)25; mostly 7S]. Zeros of $J_n(x)$ and of J (x). Values of $E_n(\rho)$ and $F_n(\rho)$, [ρ = 0(.001)1; 7D]. Values of $E_n(\rho)$ and F (ρ), [ρ = 0(.001)1; 6D]. Values of $G_n(\rho)$ and $H_n(\rho)$, [ρ = 0(.001)1; 6D]. Values of C_n [illegible] = ½(1)½; 10S].

Note: The above volumes represent the continuation of [illegible] project begun in 1938 by the Work Projects Administration of the City of New York, and taken over by the United States National Bureau of Standards in 1943. Their purpose is to provide tabulations of mathematical functions which are of fundamental importance in pure and applied mathematics. They are of particular value to physicists and engineers concerned with the solution of complex problems relating to wave motion, analysis of atomic and molecular structure, elasticity heat conduction, hydrodynamics, etc. Each volume describes how the tables were computed, methods of use and methods of interpolation. In the tables of contents the figures in the square brackets denote the range, the interval between successive arguments, and the number of decimal places or significant figures in the tabulated entries.

UNITED STATES NATIONAL BUREAU OF STANDARDS NATIONAL APPLIED MATHEMATICS LABORATORIES, THE COMPUTATION LABORATORY

Tables of Bessel functions of fractional order volume I. New York Columbia University Press, 1948 413 p illus. 27 cm. $7.50 66

Contents (abridged): Note on modified differences. Bibliography Constants. Tables of $J_n(x)$. Tables of $A_n(x)$ and $B_n(x)$ [25(1)[illegible](1)[illegible](10)5,000(100)10,000(200)30,000; 10D]. Zeros of $J_n(x)$. Tables of sines and cosines. Everett' interpolation coefficients. Multiples of /2. Table of $L_n(x)$—for interpolating in the n-direction.

Note: The tables presented in this volume give functional values to 10 decimal places for $J_n(x)$ for [illegible] ⅓, ¼, ⅔, and ¾. Methods of interpolation to obtain $J_n(x)$ for other values of the index are described in the introduction. A second volume planned for publication will give values for $I_n(x)$. Both volumes will be of value in the solution of problems in applied mathematics such as elasticity heat conduction, and hydrodynamics.

UNITED STATES NATIONAL BUREAU OF STANDARDS

Tables of the Bessel functions $Y_0(x)$ $Y_1(x)$ $K_0(x)$ $K_1(x)$ $0 \leq X \leq 1$ Washington D C. Government Printing Office, 1948 60 p 26 cm. (United States. National Bureau of Standards. Applied mathematics series. 1) Paper $0.35 67

Contents: Introduction. Table of $Y_0(x)$ and $Y_1(x)$, with auxiliary functions: Values of $C_n(x)$ and $D_n(x)$ [illegible] = 0, 1 [illegible] = [0(.0001)0.005; [illegible]D]. Values of $Y_0(x)$ and Y (x); [illegible] = [0(.0001)0.05(.001)1]; mostly [illegible]]. Table of $K_0(x)$ and $K_1(x)$, with auxiliary functions: Values of $E_n(x)$ and $F_n(x)$ [illegible] = 0, 1; [illegible] = [0(.001)0.03 7D]. Values of $K_0(x)$ and $K_1(x)$ [illegible] = [0(.0001)0.03(.001)1 7S].

Note: These tables were compiled chiefly to be of assistance to nuclear technologists in calculating the multiplicative properties of chain reacting piles, neutron distributions, etc., involving cylinder functions. Physicists and engineers in other fields will also find them useful.

CALCULATING MACHINES

HARVARD UNIVERSITY COMPUTATION LABORATORY

A manual of operation for the automatic sequence controlled calculator With a foreword by James Bryant Conant. Cambridge Mass. Harvard University Press 1946 561 p illus. 27 cm. (Harvard University Computation Laboratory Annals Vol. I) $8.00 68

Contents: Historical introduction. Description of the calculator Electrical circuits. Coding. Plugging instructions. Solution of examples. Bibliography Introduction to the Appendices. Sequence codes. Sequence circuits. Register circuits. Multiply unit circuits. Divide unit circuits. Relay list. Cam list. Fuse list. Index.

Note: The official manual was prepared and published not only for the benefit of the staff of the laboratory who operate the automatic sequence controlled calculator but also for scientists and engineers in general who are interested in studying the potential applications of this machine. The bibliography is an extensive but not exhaustive record of the international literature of numerical analysis.

MURRAY FRANCIS JOSEPH

The theory of mathematical machines. Revised edition. New York King's Crown Press, 1948. 139 p. illus 28 cm. Paper $3.50 69

Contents: Part I, Digital machines: Counters. Digital counters. Digital multipliers. The punch card machine. Part II, Continuous operators: Adders. Multipliers. Integrators and differentiators. Amplifiers. The representation of function of one variable. Part III, The solution of problems: Introduction. Examples of similitude solvers. Direct calculators. Adjusters. Electronic digital machines. Accuracy noise and stability Part IV Mathematical instruments: Planimeters Integrometers. Integraph. Harmonic analyzers. Bibliography Index.

Note: An outline of the mathematical principles and concepts underlying the design and construction of various types of mathematical calculating machines. Although the emphasis is on the theoretical aspects of the subject, the mechanical devices utilized to perform such operations as addition, multiplication, representation of functions, integration and differentiation are described in some detail. In this edition the discussions of digital machines and trigger circuits have been expanded, and new chapters added which deal with electronic digital computers, and noise and stability of computing mechanisms. The bibliography which consists largely of references to articles and books dealing with the mechanical details of calculating machines has been enlarged, and an index is now included.

STROHM RUFUS TRACY AND ARCHIBALD DE GROOT

The slide rule, how to use it. Scranton, Pa. International Textbook Company 1948 95 p illus. 22 cm. $2 00 70

Contents: Construction of slide rules. Usual operations with Mannheim slide rules. Special uses of Mannheim slide rules. Slide rules with folded scales and log log scales. Circular slide rule. Index.

Note. (134) A clearly-written manual intended for self-instruction. The exposition is supplemented by illustrations that depict actual settings on the rule. A chapter on the circular slide rule, table of contents and an index have been added otherwise the book appears to be unchanged from the 1939 edition.

SVOBODA, ANTONÍN

Computing mechanisms and linkages. Edited by Hubert M. James. Office of Scientific Research and Development, National Defense Research Committee. New York Mc

Values of F and t, at probability scale. Part II, Greek alphabet. Weights and measures. Miscellaneous physical constants. Important mathematical constants. Formulas from algebra. Formulas from geometry. Formulas from trigonometry. Hyperbolic functions. Formulas from plane analytic geometry. Formulas from solid analytic geometry. Curves for reference. Derivatives. Indefinite integrals. Definite integrals. Series. Index.

Note: A selection of tables and formulas most frequently used by students and professional workers in the fields of mathematics, physics, and engineering. Particular attention has been given to layout and typography resulting in high degree of legibility. An alternative edition which contains only the first part is available from the same publisher. 160 p., $1.00.

SALZER, HERBERT E.

Table of coefficients for obtaining the first derivative without differences. Washington, D. C. Government Printing Office. 1948. 20 p. 27 cm. (United States. National Bur[illegible] of Standards. Applied mathematics ser[illegible]) Paper $0.15

Note: The numerical data presented in these tables [illegible] differentiation of the Lagrangian interpolation [illegible] $\sim \frac{1}{hC(n)} \sum C(p) f(a + ih)$. The[illegible] polynomials $C(p)$ for p ranging from [illegible] = 4, 5 and 6, the polynomials [illegible] for = 7 they are tabulated.

SPENCELEY, GEOR[illegible] M. SPENCELEY

Smithsonian elliptic [illegible] pared by G. W. and R. [illegible] cation 3863) Washington [illegible] sonian Institution. 1947. 3[illegible] (Smithsonian miscellaneous coll[illegible] 109, whole volume) $4.50

Contents: Preface. Elliptic functions tables $\theta = 1$ [illegible] Appendix. Hyperbolic functions. Circular functions.

Note: A series of tables printed to 12 decimal figures [illegible] values as follows for elliptic functions from $\theta = 1°$ to $\theta = 89°$ from = 0 to = 90 = (v/90)K = F(φ, k), sn u, cn u, dn u, E(φ, k), A(v), D(v).

TURRELL, FRANKLIN MARION

Tables of surfaces and volumes of spheres and of prolate and oblate spheroids and spheroidal coefficients. Berkeley and Los Angeles, University of California Press. 1946. 153 p. illus. 22 cm. $2.00 60

Contents: Preface. Introduction: Definitions. Symbols used in tables. Surfaces and volumes of spheres. Surfaces and volumes of spheroids. Surface coefficients for prolate spheroids. Surface coefficients for oblate spheroids. Volume coefficients for prolate spheroids. Volume coefficients for oblate spheroids. Appendices: Derivations of formulas. Curves of and coefficients. Approximate per cent errors for tables 3, 4, 5, and 6. Index.

Note: The original tables in this book were designed particularly for use in calculating the surfaces and volumes of citrus fruits, but they can be applied also to other fruits, to melons and nuts, and to other geometrically regular bodies approximating these shapes. The tables are constructed so as to facilitate very rapid approximations of the areas and volumes without the necessity for using interpolation and with very small consequent error.

UNITED STATES NATIONAL BUREAU OF STANDARDS MATHEMATICAL TABLES PROJECT

Table of arc sin x, prepared by the Mathematical Tables Project conducted under the sponsorship of the National Bureau of Standards. Present volume begun under the auspi[ces] of the Work Projects A[illegible] the City of New York [illegible] the support of the [illegible] search and Develo[illegible] bia University. $3.50

Contents (abr[illegible]) (.00001)1; 1 [illegible] Values of [illegible] tables. [illegible]

$\frac{d}{dx} P$ [illegible]

Table XIV [illegible]

tables: Table XV [illegible]

Exact values of P [illegible](x)

Table XVII. Values of √

+ f(n)] = [1(1)1 4D–7D] factor N_n = Table XIX: First [illegible] CF(n + 1,) − n; + 1 − 1).

Tables of fractional po[illegible] the Mathematical Tables Pro[illegible] under the sponsorship of the Na[illegible] of Standards. Present volume begu[illegible] auspices of the Work Projects Admi[illegible] for the City of New York and complet[illegible] the support of the Office of Scientific Re[illegible] and Development. New York, Columbia Uni[illegible]versity Press, 1946. 486 p. 27 cm. $7.50 64

Contents: Bibliography. Part [illegible] Values of A^x: Table 1, A = 2(1)9 = [0.001(.001)0.01(.01)0.99; 18D]. Table 2, A = 10 [illegible] = [0.00 (.001) .800; 15D]. Table 3, A = π [illegible] = [0.001(.001)1.000; 18D, 15D], [illegible] x, 1/4, 1/3, 1/2, 2/3, 3/4, and 1(1)12. Table 4, A = [0.01(.01)0.99; [illegible]

BRAND LOUIS

Vector and tensor analysis New York John Wiley & Sons Inc. 1947 439 p illus. 22 cm. $5.50 78

Contents: Vector algebra. Motor algebra. Vector functions of one variable. Linear vector functions. Differential invariants. Integral transformations. Hydrodynamics. Geometry on surface. Tensor analysis. Quaternions. Index.

Note The usefulness of knowledge of vector and tensor analysis to scientists and engineers who must deal with problems in mechanics, hydrodynamics and electrodynamics is well established. This book is designed for students preparing to enter science or engineering, but it can also be used independently as survey of modern methods. In either case sound knowledge of introductory college mathematics is prerequisite. The present volume is devoted chiefly to the vector analysis of Gibbs with three chapters devoted to tensor analysis. A second volume is planned which will deal more extensively with applications of the latter method.

BRITTON, JACK ROLF, AND L CLIFTON SNIVELY

Algebra for college students. New York Rinehart & Company Inc., 1947 529 p illus 22 cm. $3.25 79

Contents (abridged) Fundamental ideas from arithmetic. The language of algebra. Special products and factoring. Fractions. Graphical representation and functional notation. Linear equations in more than one variable. Exponents and radicals. Operations with radicals. Quadratic equations in one unknown. Ratio, proportion, and variation. Approximate numbers. Logarithms. The binomial theorem and mathematical induction. Progressions. Complex numbers. Advanced topics in quadratic equations. Theory of equations. Determinants. Permutations, combinations, and probability. Appendix. Index.

Note: The first twelve chapters of this text for college students form the greater part of another text by the same authors entitled *Intermediate algebra*, New York Rinehart & Company 1947 The remaining chapters in this volume are devoted to topics normally covered in college courses. Oral and written exercises are given in each section, and the appendix includes tables of powers, roots, and logarithms. The authors are members of the faculty of the University of Colorado.

GRIFFITHS LOIS WILFRED

Introduction to the theory of equations. Second edition New York John Wiley & Sons Inc., 1947 278 p illus. 22 cm. $3.50 80

Contents: Binomial equations. Cubic and quartic equations. General theorems on roots of polynomial equations. Isolation and computation of real roots of real polynomial equations. Introduction to determinants. Determinants. Systems of linear equations and determinants. Complex numbers and the fundamental theorem of algebra. Symmetric functions. Bibliography Answers Index.

Note: A textbook intended principally for college students who are planning to major in mathematics. Plane trigonometry plane analytic geometry and differential calculus are prerequisites. Inductive reasoning is used in the development of theorems, for example, third, fourth, and fifth order determinants are defined first, and in manner that clarifies the more complicated definition of the nth order which follows. Restatement is constantly used to help the student through difficult proofs. De Moivre's theorem, Sturm's theorem, Descartes' rule and Horner's method are discussed. The work was first published in 1943 under the title of *Determinants and systems of linear equations*.

KELLER, MARION WILES

College algebra. Boston Houghton Mifflin Company 1946 471 p illus. 22 cm. $3.25 81

Contents: Review of fundamental operations Linear equations. Type products—factoring—equations. Fractions and fractional equations. Exponents and radicals. Quadratic equations. Systems of equations involving quadratics. Ratio—proportion—variation Progressions. Mathematical induction and the binomial theorem. Logarithms. Complex numbers Theory of equations. Inequalities. Determinants. Elements of the mathematics of finance. Permutations and combinations. Probability and insurance. Partial fractions. Infinite series. Tables. Answers to odd-numbered problems. Index.

Note. A well-organized introductory textbook. The presentation of elementary topics in the early chapters is sufficiently advanced over high-school algebra to benefit even those students who have had one or more courses in secondary school. Problems have been designed not only to provide drill but to illustrate variations in theory. Also considerable number of the problems illustrate applications of algebra in various sciences and engineering. The publisher has provided an attractive format.

McCOY, NEAL HENRY

Rings and ideals. LaSalle Ill. Open Court Publishing Company 1948 216 p 18 7 cm. (The Carus mathematical monographs. Number eight) $3 00 82

Contents Definitions and fundamental properties. Polynomial rings. Ideals and homomorphisms. Some imbedding theorems. Prime ideals in commutative rings. Direct and subdirect sums. Boolean rings and some generalizations. Rings of matrices. Further theory of ideals in commutative rings. Bibliography Index.

Note A treatise on abstract algebra which introduces the fundamental theory of rings and the role of ideals in the theory A knowledge of advanced college algebra should enable the reader to follow the text without difficulty In addition to the bibliography at the end of the volume, reference lists are provided with each chapter

NOWLAN FREDERICK STANLEY

College algebra. New York McGraw Hill Book Company Inc., 1947 371 p illus 24 cm. $3 00 83

Contents Introduction. Negative numbers. The four fundamental operations of algebra. Factoring Fractions. Equations and their solutions. Linear equations in one unknown. Linear functions of one unknown. Linear equations in two unknowns. Simultaneous linear equations. Exponents and radicals. Quadratic equations. Simultaneous quadratic equations. Ratio, proportion, and variation. Progressions. The binomial theorem. Logarithms. Interest and annuities. Permutations and combinations. Probability Mathematical induction. Complex numbers Theory of equations. Partial fractions. Determinants. Appendix Tables. Answers. Index.

Note A lucidly written and well-organized textbook for introductory courses. The fundamental elementary concepts and operations of algebra such as are usually studied in high school courses are reviewed rather thoroughly in early chapters of the book; but, as the table of contents indicates, the more advanced topics are taken up in the later chapters. Numerous worked examples are included in the author's exposition, and there are fair number of exercises for students to work.

RICHARDSON, MOSES

College algebra. New York Prentice-Hall, Inc., 1947 472 p. illus. 24 cm. (Prentice-Hall mathematics series Albert A. Bennett, editor) $3.80 84

Contents Preface for the student. The number system of algebra. What is algebra? Algebraic expressions. Functions and graphs. Elementary operations with polynomials Factoring of polynomials. Elementary operations with fractional expressions. Linear equations and linear functions. Integral and fractional exponents. Radicals. Quadratic equations and quadratic functions. Systems of equations in two unknowns involving quadratics Ratio, proportion, and variation. Complex numbers. Theory of equations. Determinants and elimination theory Permutations and combinations. Probability Mathematical induction. The binomial theorem. Progressions. Inequalities. Logarithms Mathematics of investment. The Euclidean algorithm. Partial fractions. Infinite series. Interpolation and curve fitting. Answers to odd numbered exercises. Tables. Index.

Note: Topics usually covered in first-year college algebra courses are presented in this text The introductory chapters provide review of high school algebra, but presented at level consistent with the attainments of college students. Fundamental concepts are explained in detail. The treatment is such that various indicated chapters may be omitted to fit in with the requirements of shorter courses. Review exercises are interspersed at appropriate points throughout the textual material.

RIDER JOHN FRANCIS AND SEYMOUR D USLAN

Understanding vectors and phase. New York John F Rider Publisher Inc. 1947 153 p. illus. 19 cm. $1.89 85

Mathematics

Contents: What is vector? The coordinate system. Single vector representation. Multiple vector presentation. Resolution of vectors. Addition of vectors. Subtraction, multiplication, and division of vectors. Radio circuit problems. Bibliography. Index.

Note: A clear and concise explanation of the theory of vector analysis and its utilization to indicate phase relationships and to solve radio circuit problems. The book is written for the radio serviceman, technician, or student who does not have an engineering background but is acquainted with standard radio.

SIMMONS HARVEY ALEXANDER
College algebra. New York The Macmillan Company 1948 619 p illus. 22 cm. $4.00 86

Contents. Elementary topics. Factoring. Fractions. Linear equations and linear functions. Systems of linear equations. Exponents and radicals. Logarithms. Slide rule. Quadratic equations. Systems of equations involving quadratics. Ratio, proportion, and variation. Progressions. Mathematical induction. The binomial theorem. The mathematics of investment. Permutations and combinations. Probability. Inequalities. Complex numbers. Theory of equations. Determinants. Partial fractions. Tables. Answers to odd-numbered problems. Index.

Note: A textbook sufficiently flexible in arrangement to permit the instructor to adapt it easily to course in intermediate algebra, college algebra, or terminal college course. Although there are ample illustrative examples and detailed explanations, the presentation is mainly theoretical, and except for few inclusions such as the mathematics of investment and probability there are few applications to daily life.

UNDERWOOD RALPH SYLVESTER, AND OTHERS
Intermediate algebra by Ralph S Underwood Thomas R. Nelson and Samuel Selby New York The Macmillan Company 1947 283 p. illus 21 cm. $2 90 87

Contents. Algebra as language and tool. Type products and factoring. Fractions. Linear equations in one unknown. Functions and graphs. Simultaneous linear equations. Exponents and radicals. The number system. Quadratic equations. Special equations in one unknown. Simultaneous equations. Ratio, proportions, and variations. The binomial theorem. Progressions. Logarithms. Tables. Answers. Index.

Note: The authors have designed this text to meet the needs of first year college students who do not have good grounding in elementary algebra. Because of its clear presentation of elementary principles, it can be used also in self-instruction by persons who have had high school course.

USPENSKY JAMES VICTOR
Theory of equations New York McGraw Hill Book Company Inc. 1948 353 p illus. 24 cm. $4.50 88

Contents: Complex numbers. Polynomials in one variable. Algebraic equations and their roots. Limits of roots—rational roots. Cubic and biquadratic equations. Separation of roots. The theorem of Sturm. Approximate evaluation of roots. Determinants and matrices. Solution of linear equations by determinants—some applications of determinants to geometry. Symmetric functions. Elimination. Appendices: The fundamental theorem of algebra. On the theorem of Vincent. On equations whose roots have negative real part. Iteration solution of the frequency equation. Graeffe method. Answers. Index.

Note: A distinguishing feature of this book is the fullness of the exposition. It is designed primarily as textbook for college courses and such will probably be the chief use made of it. However students who wish to undertake the study of this difficult branch of mathematics by themselves will probably find this book more suited to their needs than any other now available. The method for approximating real roots that is presented in the sixth chapter was originated by the author.

THEORY OF GROUPS

CHEVALLEY CLAUDE
Theory of Lie groups I Princeton Princeton University Press 1946 213 p. 23 cm. (Princeton mathematical series M. Morse, H. P Robertson and A. W Tucker editors) $3 00 89

Contents. The classical linear groups. Topological groups. Manifolds. Analytic groups—Lie groups. The differential calculus of Cartan. Compact Lie groups and their representations. Index.

Note. The Lie groups are named for Sophus Lie, 1842–1899 famous Norwegian mathematician who invented the concept of continuous groups. The present work is designed to state and prove the main basic principles of Lie groups. In contrast to the usual treatment, which in general is confined to fragmentary aspects of the theory this treatise operates from modern viewpoint and develops the idea of continuous groups as global objects. The second volume will deal with semi-simple Lie groups. The work is of interest to mathematicians and graduate students of mathematics.

HILLE EINAR
Functional analysis and semi-groups New York American Mathematical Society 1948. 528 p 26 cm (American Mathematical Society Colloquium publications. Vol. XXXI) $7 00 90

Contents (abridged) Part One, Functional analysis: Abstract spaces. Linear operations. Vector-valued functions. Functions on vectors to vectors. Analysis in Banach algebras. Part Two, Analytical theory of semi-groups: Subadditive functions. Semi-modules. Semi-groups in the strong topology. Addition theorems in Banach algebra. Semi-groups. Analytical theory. Generator and resolvent. Generation of semi-groups. Analytical semi-groups. Spectral theory. Part Three, Special semi-groups: Translations and powers. Trigonometric semi-groups. Semi-groups in Hilbert space. Semi-groups and partial differential equations. Summability—stochastic processes—fractional integration. Appendix: Notes on Banach algebras. Bibliography. Index.

Note. A comprehensive presentation of the analytical theories of semi-groups. The discussion of semi-groups is preceded by compact but inclusive discussion of functional analysis especially in relation to Banach spaces and algebra. The work is intended primarily for professional mathematicians.

ARITHMETIC AND THEORY OF NUMBERS

MEYERS LESTER
High-speed mathematics. New York D Van Nostrand Company Inc. 1947 554 p. illus 21 cm. $5 95 91

Contents. There is short-cut for virtually every multiplication problem. The breakdown method of multiplication. More tricks in mental arithmetic. The "double-and-halve" method of multiplication. Aliquot parts. Percentages. More short-cuts in multiplication. Dealing with parts of metric. More short-cuts in multiplication. Dealing with parts of and discounts. Preparing and checking bills. Checking results in multiplication, the gross, the ton, and the yard. Checking results in addition. Avoiding errors in subtraction. Division can be as simple as multiplication. The "double-and-double" method of division. Short-cutting the short-cuts. Slide rules: how to save pencil-and-paper work even with short-cuts. Slide rules and calculating machines: they are ingenious and necessary devices, but why be slave to them? Averages and proportions. Profit ratios. Partial payments and interest on unpaid balances. Compound interest and annuities. Stocks and bonds. Decimals and fractions. Glossary.

Note. Although skill in mental arithmetic is no longer as essential as it was before calculation machines were found in every office, it is still useful facility in many occupations. This book deals chiefly with short-cuts that may be employed to increase the range of computations that can be made without benefit of pencil and paper (or machines) and to shorten the paper work in problems too complicated to do mentally. It contains also much material on methods of checking computations for errors. As books on rapid methods go, it is good one with unusually full treatments of calculations in such fields as annuities, interest, partial payments, and profit ratios.

ORE OYSTEIN
Number theory and its history New York McGraw Hill Book Company Inc. 1948. 370 p illus 21 cm. $4 50 92

Contents. Counting and recording of numbers. Properties of numbers—division. Euclid's algorism. Prime numbers. The aliquot parts.

Indeterminate problems. Theory of linear indeterminate problems. Diophantine problems. Congruences. Analysis of congruences. Wilson's theorem and its consequences. Euler' theorem and its consequences. Theory of decimal expansions. The converse of Fermat's theorem. The classical construction problems. Bibliography. General name index. Subject index.

Note Numbers and number theory have fascination for laymen as well as for professional mathematicians. This book is suitable for both groups even though it is based on an introductory course given at Yale University. The greater part of it is elementary and requires only knowledge of simple algebra for comprehension. On the other hand, the author' treatment of many topics is original and will appeal to mathematicians. History and exposition are skillfully interwoven and the result is clear and interesting book.

ANALYSIS

BLISS GILBERT AMES

Lectures on the calculus of variations. Chicago University of Chicago Press, 1946 296 p illus. 23 cm. $5 00 93

Contents: Part 1, Simpler problems of the calculus of variations: The calculus of variations in three-space. Sufficient conditions for minimum. Fields and the Hamilton-Jacobi theory. Problems in the plane and in higher spaces. Problems in parametric form. Problems with variable end-points. Part II, The problem of Bolza. The multiplier rule. Further necessary conditions for minimum. Sufficient conditions for minimum. Appendix. Existence theorems for implicit functions and differential equations. A bibliography for the problem of Bolza. Index.

Note The first part of this work introduces the reader to the modern theories of the calculus of variations. The second and more advanced part embodies the results of studies by the author and his pupils of the problem of Bolza. The book contains material of interest to professional mathematicians, particularly in the second part. It is also used as text in graduate mathematics and physics courses. The bibliography of the problem of Bolza cites seventy-seven books and periodical articles.

BOCHNER, SALOMON AND WILLIAM TED MARTIN

Several complex variables Princeton Princeton University Press 1948 216 p. illus 23 cm. (Princeton mathematical series Marston Morse, H. P Robertson A. W Tucker editors) $4 00 94

Contents: Groups of transformations by formal power-series. Basic facts about analytic functions of real and complex variables. Analytic mappings with fixed point. Analytic completion. Singularities at boundary points. Inequalities, bounds and norms. The theory of Hartogs—subharmonic functions. Removable singularities. Algebraic theorems. Local analytic varieties. Index.

Note An introductory presentation for graduate students and mathematicians. The authors have assumed that the reader will have studied advanced calculus and will be familiar with the elementary concepts associated with the Lebesgue integral.

CHURCHILL RUEL VANCE

Introduction to complex variables and applications. New York McGraw Hill Book Company Inc., 1948 216 p illus. 23 cm. $3.50 95

Contents: Complex numbers. Analytic functions. Elementary functions. The geometry of elementary functions. Integrals. Power series. Residues and poles. Conformal mapping. Applications of conformal mapping. The Schwarz-Christoffel transformation. Analytic continuation. Riemann surfaces. Appendices Bibliography Table of transformations of regions Index.

Note: The major portion of this text outlines the basic concepts and theory of complex variables as utilized in solving linear boundary value problems. Particular emphasis is placed on the theory of residues and conformal mapping. The practical application of these methods to problems in potentials, steady temperatures, and flow of fluids is covered briefly in the four final chapters. The treatment is concise and intended for the use of graduate students in physics, engineering, and mathematics.

DOUGLASS, RAYMOND DONALD, AND SAMUEL D ZELDIN

Calculus and its applications New York Prentice-Hall, Inc. 1947 568 p illus 21 cm. (Prentice-Hall mathematics series, Albert A. Bennett, editor) $5 15 96

Contents. Functions and limits. Differentiation. Applications, maxima and minima, rates. Differential and integral. Differentiation and integration of trigonometric and exponential functions. Summation and definite integration. Methods of integration. Geometrical applications and parametric equations. Polar coordinates. Centroid and moment of inertia. Partial differentiation. Double integration. Infinite series. Ordinary differential equations. Vectors. Mathematical tables. Answers to exercises. Index.

Note In this college text the authors have made effort to adapt their subject to meet the special needs of students of the physical and engineering sciences. The form of presentation is concise, with proofs of formulas and explanatory discussions reduced to minimum. Numerous worked-out examples and review problems are used to illustrate the applications of calculus to the solution of scientific and engineering problems. The authors are Professors of Mathematics at Massachusetts Institute of Technology

GRAVES LAWRENCE MURRAY

The theory of functions of real variables. New York McGraw Hill Book Company Inc. 1946 300 p illus. 23 cm $4.00 97

Content Introduction. The real number system. Point sets. Functions and their limits properties of continuous functions. Fundamental theorems on differentiation. The Riemann integral. Uniform convergence. Functions defined implicitly Ordinary differential equations. The Lebesgue integral. The Stieltjes integral. Index.

Note: In addition to the customary introduction and treatment of this subject by development of the necessary principles of formal logic followed with study of function behavior this textbook offers some of the more unusual theorems on implicit functions, differential equations, and the Lebesgue and Stieltjes integrals. Although the author has included some exercises, he has omitted many proofs, thus developing the student to gain mathematical maturity by developing them himself under the guidance of an instructor. Chapter references are given and the student is urged to use them. The book will be useful chiefly as an accompaniment to introductory courses in graduate schools.

HAHN HANS, AND ARTHUR ROSENTHAL

Set functions. Albuquerque New Mexico The University of New Mexico Press 1948 324 p 26 cm. $12.50 98

Contents: Introduction. Additive and totally additive set functions. Measure. Measurable functions. Integration. Differentiation. Bibliography (list of books quoted) List of symbols and signs Index.

Note: This book is based on the senior author's two-volume work *Reelle Funktionen* (volume 1, Leipzig: Akademische Verlagsgesellschaft, 1932) the second volume of which was completed by Arthur Rosenthal but never published due to war conditions. The systematic manner of presentation and the inclusion of detailed proofs make the book of value as text to graduate students in mathematics. Bibliographies are given at the end of each main section.

KELLS LYMAN MORSE

Elementary differential equations. Third edition. New York McGraw Hill Book Company Inc. 1947 312 p illus. 21 cm. $3.00 99

Contents. Definitions and elementary problems. Applications. Differential equations of the first order and the first degree. Applications involving differential equations of the first order. First-order equations of degree higher than the first—Singular solutions. Linear differential equations with constant coefficients. Applications of linear equations with constant coefficients. Miscellaneous differential equations of order higher than the first. Applications. Differential equations in more than two variables—Existence theorems. Solution by series and by methods involving successive approximations. Partial differential equations of the first order. Partial differential equations of order higher than the first. Applications of partial differential equations. Index. Answers.

Note. (258) An important feature of this text for students of mathematics, engineering and physics, is the close integration of theory and practical applications. All the fundamental types of differential equations are covered, but emphasis is placed on substitution, integration by inspection and use of integrating factors. Now included in this revised edition is an expansion of the section dealing with the solution of electrical problems, new material relating to Legendre and Bessel equations, and new chapter illustrating the applications of partial differential equations.

LEFSCHETZ SOLOMON

Lectures on differential equations. Princeton N J Princeton University Press 1946 209 p illus. 23 cm. (Annals of mathematics studies. No 14) Paper $3 00 100

Contents: Some preliminary questions. Differential equations. Linear systems. Critical points and periodic motions questions of stability Two dimensional systems. Application to certain equations of the second order Index.

Note. A collection of lectures in which the author has endeavored to provide graduate students and mathematicians with foundation and some insight into the potentialities of differential equations. A knowledge of matrix theory on the part of the reader has been assumed.

MIDDLEMISS ROSS RAYMOND

Differential and integral calculus. Second edition. New York McGraw Hill Book Company Inc., 1946 497 p illus 23 cm. $3.50 101

Contents (abridged) Functions and their graphs The limit of function. The derivative Differentiation of algebraic functions. The second derivative. The trigonometric functions. The exponential and logarithmic functions. Derivative of arc—curvature. Parametric equations The differential. Integration. Trigonometric integrals The definite integral. Approximate integration. First moment—centroid. Second moment—radius of gyration. Solid analytic geometry Partial derivatives. Multiple integrals. Infinite series. Differential equations. Table of integrals. Numerical tables. Index.

Note (232) An introduction for college students. The plan of the first edition has been retained but many sections and several entire chapters have been rewritten. Among the revised chapters are those on multiple integrals and partial derivatives. The chapter on solid geometry has been added and the problems in the first edition have been largely replaced with new ones.

RITT JOSEPH FELS

Integration in finite terms Liouville s theory of elementary methods. New York Columbia University Press 1948 100 p. 22 cm. $2 75 102

Contents: Elementary functions of one variable. Algebraic functions with elementary integrals. Integration of transcendental functions Further questions on the elementary functions. Series of fractional powers. Integration of differential equations by quadratures. Implicit and explicit elementary solutions of differential equations of the first order Further implicit problems. References.

Note. J Liouville, French mathematician of the nineteenth century developed theory of integration in finite terms, and used it to prove among other things that elliptic integrals of the first and second kinds and the probability integral are not elementary He proved also that Bessel equation is not integrable by quadratures except for special values of the parameter This monograph describes Liouville's work and that of some of his followers.

RITT JOSEPH FELS

Theory of functions Revised edition. New York King's Crown Press 1947 181 p illus. 28 cm. Paper $3 50 103

Contents (abridged) The real number system. Linear point sets. Functions and continuity Riemann integration. Infinite series of numbers. Sequences of functions. Functions of two variables Complex and hypercomplex numbers. Curves and regions. Curvilinear integrals. Jordan curves Analysis situs of the triangle The Cauchy integral theorem for triangles. Extension of the Cauchy integral theory to polygons. Infinite sequences and infinite series of analytic functions. Power series. Taylor expansion Liouville's theorem and the fundamental theorem of algebra. Laurent series. Singularities of analytic functions. Periodic functions. The Weierstrass factorization theorem. Meromorphic functions and Mittag-Leffler's theorem. Theory of residues. Analytic continuation.

Note. A textbook for advanced undergraduate and graduate students in mathematics. The work is designed as foundation for one-year course in the subject in which approximately 70 periods of 75 minutes each are devoted to discussion of the real variable and 14 periods of the same length are given to consideration of the complex variable. Completion of the course equips the student to deal effectively with almost any topic of mathematical analysis. In treating the real number system the author relies upon infinite decimals rather than upon the Dedekind or Cantor theories. All geometrical questions are formulated in arithmetic terms and every topological assumption made is explicitly stated.

SHERWOOD, GEORGE EULAS FOSTER, AND ANGUS E TAYLOR

Calculus Revised edition. New York Prentice-Hall, Inc. 1946 568 p. illus. 24 cm. (Prentice-Hall mathematics series Albert A. Bennett, editor) $5 00 104

Content Greek alphabet; formulas and tables for reference. Variables, functions, and the notion of limit. The derivative. General formulas of differentiation—algebraic functions. Applications. Differentiation of transcendental functions with applications. Differentials. The law of the mean. Further applications. The inverse of differentiation. The definite integral. The technique of integration. Geometrical applications of definite integrals. Physical applications of definite integrals. The hyperbolic functions. More about limits. Infinite series. Taylor's series and Taylor's formula with the remainder Analytic geometry of three dimensions. Partial differentiation. Curves and surfaces in space. Envelopes. Double integrals. Triple integrals. Appendix. Index.

Note (248) A college textbook designed as an introduction for prospective engineers, mathematicians, and scientists. Particular attention is given to the application of calculus in science and engineering, and numerous exercises and problems and answers are provided for each topic. In this revision the general scope and purpose of the previous edition have been retained, but much of the material has been rewritten and rearranged. There is new chapter on curves and surfaces in space and the number of illustrative exercises and review problems has been increased. These changes and additions account for more than sixty additional pages.

SMITH EDWARD STAPLES AND OTHERS

Unified calculus, by Edward S. Smith Meyer Salkover and Howard K. Justice. New York John Wiley & Sons, Inc., 1947 534 p. illus. 22 cm. $3.50 105

Contents: Variables, functions, and limits. Differentiation and applications. Integration, area, volume. Centroid, moment of inertia, pressure, work Differentiation of algebraic functions. Differentiation of transcendental functions. Further applications of derivatives. Plane curves—rectangular coordinates Integration, Methods of integration. Further applications of integration. Approximate integration. Indeterminate forms. Infinite series. Expansion of functions. Hyperbolic functions Partial differentiation. Multiple integrals. Differential equations Table of integrals. Formulas for reference. Tables. Index.

Note A revision of the authors' Calculus, New York, 1938. It is designed for introductory college courses. The arrangement of subject matter is intended to emphasize the basic unity of differential and integral calculus, and to make it possible for the student to make early use of the techniques of both Throughout the work in this edition there are number of minor revisions and the entire chapter on differential equations has been added. The authors are members of the faculty of the University of Cincinnati.

TRUESDELL C

An essay toward a unified theory of special functions based upon the functional equation $\frac{\partial}{\partial z}F(z, \alpha) = F(z, \alpha + 1)$ Princeton N J Princeton University Press, 1948 182 p. 23 cm. (Annals of mathematics studies No 18) $3 00 106

Contents (abridged) The object and plan of this essay Reduction to the F-equation. Existence and uniqueness theorems. Concluding unsolved problems. Appendices: Special functions. Opera-

ties. Examples of equations of type (1.4) not reducible to the *F* equation. Bibliography

Note: An essay for graduate mathematicians in which the author to quote the preface, "presents and explains one particular branch of analysis, specially developed to provide new method of deducing and proving formal relations among special functions, new method which turns out to be very powerful.

VON NEUMANN, JOHN, AND OSKAR MORGENSTERN

Theory of games and economic behavior Second edition Princeton Princeton University Press 1947 641 p illus. 27 cm. $10 00 107

Contents (abridged): Formulation of the economic problem. General formal description of games of strategy Zero-sum two-person games: theory Zero-sum two-person games examples. Zero-sum three-person games. Formulation of the general theory: Zero-sum n-person games. Zero-sum four-person games. Some remarks concerning n ≥ 5 participants. Composition and decomposition of games. Simple games. General non-zero-sum games. Extension of the concepts of domination and solution. Appendix. Index of figures. Index of names. Index of subjects.

Note: An exposition of the authors' mathematical theory of games with major applications to problems in economics and sociology and minor applications to games. The book is planned for the professional economist and sociologist, as well as the gambler having better than average intellect. Although verbal explanations accompany most of the important mathematical deductions, considerable knowledge of mathematical logics is required in order to grasp the work in its entirety. Beyond addition of the appendix containing mathematical proof, the present edition differs only slightly from the first.

WALL HUBERT STANLEY

Analytic theory of continued fractions. New York D Van Nostrand Company Inc., 1948 433 p. illus. 24 cm (The university series in higher mathematics M H. Stone chairman editorial board) $6.50 108

Contents: Part I, Convergence theory The continued fraction as product of linear fractional transformations. Convergence theorems. Convergence of continued fractions whose partial denominators are equal to unity Introduction to the theory of positive definite continued fractions. Some general convergence theorems Stieltjes type continued fractions. Extensions of the parabola theorem. The value region problem. Part II, Function theory: J-fraction expansions for rational functions. Theory of equations. J-fraction expansions for power series. Matrix theory of continued fractions. Continued fractions and definite integrals. The moment problem for finite interval. Bounded analytic functions. Hausdorff summability The moment problem for an infinite interval. The continued fraction of Gauss. Stieltjes summability The Padé table. Bibliography Index.

Note: An important contribution to the theory of continued fractions. The author has endeavored to combine the results obtained by himself and earlier writers in the field, including Stieltjes, Van Vleck and Pringsheim, into unified theory and to develop the theory as part of larger analytical structure obtained "by regarding the continued fraction as generated by an infinite sequence of linear fractional transformations in single variable, and also as arising from single linear transformation in infinitely many variables. The book is organized as textbook, but it is of interest to any mathematician working in this field. A knowledge of elementary function theory is presupposed.

WIDDER DAVID VERNON

Advanced calculus New York Prentice-Hall, Inc. 1947 432 p illus. 24 cm. $6 00 109

Contents: Partial differentiation. Vectors. Differential geometry Applications of partial differentiation. Stieltjes integral. Multiple integrals Line and surface integrals Limits and indeterminate forms. Infinite series. Convergence of improper integrals The gamma function; evaluation of definite integrals. Fourier series. The Laplace transform. Applications of the Laplace transform. Index of symbols. Index.

Note: Manipulative problems with which the student is already familiar are treated first in this textbook, and these are followed gradually by discussions of calculus theory Each section consists of definitions, theorems, proofs, examples, and exercises; an unusual feature being the inclusion of material dealing with the Stieltjes integral and the Laplace transform. Although there is more subject matter than can ordinarily be accommodated in standard two-semester college course, the relative independence of each chapter enables the book to be used with variety of advanced mathematics courses, several of which are suggested by the author Mathematical maturity equivalent to that obtained from three or four semesters work in elementary calculus is required of the reader The author is Professor of Mathematics at Harvard University

STATISTICAL METHODS

COLUMBIA UNIVERSITY STATISTICAL RESEARCH GROUP

Selected techniques of statistical analysis for scientific and industrial research and production and management engineering by the Statistical Research Group Columbia University Applied Mathematics Panel Office of Scientific Research and Development. Edited by Churchill Eisenhart Millard W Hastay and W Allen Wallis. New York McGraw Hill Book Company Inc. 1947 473 p illus. 23 cm. $6 00 110

Contents: Part I, Industrial statistics: Use of variables in acceptance inspection for percent defective, by W Allen Wallis. Tolerance limits for normal distributions, by Albert H. Bowker. Multivariate quality control, illustrated by the air testing of sample bombsights, by Harold Hotelling. Effects of rounding or grouping data, by Churchill Eisenhart. Acceptance inspection when lot quality is measured by the range, by the editors. Variability of amount of inspection for double, multiple, and sequential sampling, by the editors. Part II, Planning experiments: Planning and analyzing experiments for comparing two percentages, by Edward Paulson and W Allen Wallis. Planning and interpreting experiments for comparing two standard deviations, by Churchill Eisenhart. Utilization of limited experimental facilities when the cost of each measurement depends on its magnitude, by Milton Friedman. Experiments in which the independent variable is known only in terms of probability distribution, by the editors. Planning an experiment for estimating the mean and standard deviation of normal distribution from observations on the cumulative distribution, by Milton Friedman. Abandoning an experiment prior to completion, by the editors. Planning experiments seeking maxima, by Milton Friedman. Part III, Techniques and tables: Probability that sample means are in opposite order to population means, by Churchill Eisenhart. Significance of the largest of set of sample estimates of variance, by Churchill Eisenhart Inverse sine transformation of proportions, by Churchill Eisenhart. Elements of sequential analysis, by W Allen Wallis. Index.

Note: Written and edited by top-rank authorities, this work is designed for industrialists, engineers, and scientists who need statistical methods but have no time for thorough study of the theory Although intended for non-specialists, the book is far from popularization. In fact, working knowledge of calculus and differential equations is demanded, and the authors have assumed that their readers will be accustomed to using technical publications. The forty-two page index greatly enhances the work's reference value.

COLUMBIA UNIVERSITY STATISTICAL RESEARCH GROUP

Sequential analysis of statistical data Applications. Prepared by the Statistical Research Group, Columbia University for the Applied Mathematics Panel, National Defense Research Committee, Office of Scientific Research and Development. New York Columbia University Press 1945 7 nos. in 1 v illus. 29 cm. $7 75 111

Contents: Sequential analysis in inspection and experimentation (*Introduction*) Sequential analysis when the result of single observation is classification as good or bad and when the result of the test is acceptance or rejection (*binomial distribution*) Sequential analysis when the result of single observation is classification as good or bad and when the result of the test is decision between two methods or products (*double dichotomies*) Sequential analysis

when the quality being tested is measured and when the question is whether standard is exceeded (or fallen short of) (*mean of normal distribution known standard deviation, one-sided alternative*) Sequential analysis when the quality being tested is measured and when the question is whether lot differs from standard (*mean of normal distribution, known standard deviation, two-sided alternative*) Sequential analysis of variability of quality about the average (*standard deviation of normal distribution, one-sided alternative*) Sequential analysis when quality is measured by the number of defects per unit and when the question is whether standard is exceeded (Poisson distribution) Appendices: Some properties and principles of sequential analysis.

Note. Sequential analysis proved to be so important in acceptance inspections of products manufactured for war use that information about it was classified as Restricted until May 1945. The great value of the method in inspection as compared to standard sampling procedure is that the number of samples that must be tested (and destroyed in many cases) can be considerably reduced without adversely affecting the reliability of the test results. Sequential analysis is equally applicable to the interpretation of experimental data. These seven pamphlets trace the development of sequential analysis, explain the basic theory and show its application to several types of situations that occur in acceptance inspection and in experimentation. The pamphlets are bound in loose-leaf binder

GARRETT HENRY EDWARD

Statistics in psychology and education with an introduction by R. S Woodworth. Third edition. New York Longmans, Green and Co., 1947 487 p. illus. 21 cm. $4 00 112

Content The frequency distribution. Measures of central tendency Measures of variability Cumulative distributions, graphic methods, and percentiles. The normal probability curve. Applications of the normal probability curve Sampling and reliability Testing experimental hypotheses. Linear correlation. Regression and prediction. Further methods of correlation. The reliability and validity of test scores. Partial and multiple correlation. Multiple correlation in test selection. Index

Note. (364) An established introductory text for college courses in the measurement of mental and social traits and related factors in psychology intended for students specializing in these two fields rather than for students of applied general statistics. A knowledge of elementary algebra constitutes the extent of mathematics required. A considerable part of the book has been rewritten in the third edition; and various procedures, particularly the methods of sampling and correlation, have been brought up to date. The newly added material includes information on small sample methods, an introduction to the analysis of variations, and the chapter dealing with the testing of experimental hypotheses.

HOEL PAUL GERHARD

Introduction to mathematical statistics. New York John Wiley & Sons Inc. 1947 258 p illus. 22 cm. (Wiley mathematical statistics series, Walter A. Shewhart, editor) $3.50 113

Contents. Introduction. References. Frequency distributions of one variable. Theoretical frequency distributions of one variable. Large-sample theory of one variable. Frequency distributions of two variables Theoretical frequency distributions of two variables. Frequency distributions of more than two variables. Small-sample distributions. Non-parametric methods. Testing goodness of fit. Testing statistical hypotheses. Statistical design in experiments. Tables. Index

Note A college text concerned with the fundamental principles and theories of mathematical statistics The book presupposes knowledge of elementary calculus, but theorems based on advanced calculus are also utilized. The theory of classical large-sample methods involving one or more variables forms the main topic of the first seven chapters, while remaining chapters deal with the theory of modern and small-sample methods. Each chapter concludes with references and review exercises. The tables list squares, square roots, distributions, and normal areas and ordinates. The author is Associate Professor of Mathematics in the University of California at Los Angeles.

KELLEY TRUMAN LEE

The Kelley statistical tables. Revised 1948 Cambridge, Mass. Harvard University Press 1948 223 p illus. 29 cm. $5.00 114

Contents: Introductory section Bearing upon all the tables and including inverse interpolation. Table I: Eight-place normal distribution, simple correlation, and probability functions. Table II: Five-place three-point interpolation coefficients. Table III: Ten-place four-point interpolation coefficients. Table IV: Ten-place six-point interpolation coefficients Table Eleven-place eight-point interpolation coefficients. Table VI: Four-place X^2 functions. Table VII: Eight-place square roots, cube roots, and natural logarithms. Table VIII: Eight-place functions for normalizing F for the variance ratio. Table IX Constants frequently needed.

Note The chief objective of this work is to provide statisticians with set of eight-place mathematical tables of usefulness in operations not readily accomplished with computing machines. Improvements in this edition are as follows: the original coefficient tables for direct interpolation have been replaced by more detailed tables, 3- and 4-point interpolation is now described, and complete 3rd table of cube roots is now provided. The present volume contains approximately 100 more pages than the 1938 edition.

KENNEY JOHN FRANCIS

Mathematics of statistics. Part one. Second edition. New York D Van Nostrand Company Inc., 1947 260 p illus 24 cm. $3 75 115

Contents Introduction. Frequency distributions. Graphical representation. Averages. Moments. Measures of dispersion. Types of distributions—the normal curve. Curve fitting. Correlation theory Review questions and problems. Tables. Index.

Note (372) An elementary text for college students of biology economics, education, mathematics, physics, and psychology The present work which is part of two-volume set is concerned with statistics as used for descriptive purposes Numerous exercises are inserted throughout the book to develop the student's powers of analysis and to test his knowledge of statistical theory and methodology Reference lists of related books and papers for collateral reading are included, and the only prerequisite is course in college algebra. Changes made in the second edition are largely confined to the clarifying of parts of the text as suggested by classroom experience. Part II, which deals with the statistics of inference, is still in the original edition (1939)

SMITH JAMES GERALD AND ACHESON J DUNCAN

Sampling statistics and applications. New York McGraw Hill Book Company Inc., 1945 498 p illus. 22 cm. (Fundamentals of the theory of statistics. Vol. 2) $4.25 116

Contents (abridged) Introduction. Part I, General theory of frequency curves: Probability and the probability calculus. The symmetrical binomial distribution and the normal curve. Summary of the theory of frequency curves, and some examples. Part II, Elementary theory of random sampling: A preview of sampling theory Sampling from discrete twofold population. Sampling from continuous normal populations: various sampling distributions—uses of the sampling distributions. Part III, Advanced sampling problems. Sampling from discrete manifold population Sampling fluctuations in regression statistics. Problems involving two samples. Analysis of variance. The problem of non-normality Appendix. Index.

Note A thorough treatment of statistical sampling is provided in this text for advanced students or research workers. The discussions of theory practical aspects of frequency curves, and of both elementary and advanced sampling are preceded by review of the basic principles of the subject. Application of theory to variety of practical problems is second feature of the book, and the pertinent mathematics are clearly presented along with frequent charts and tables Useful statistical tables and standard mathematical data are included in the appendix. The book is intended to serve as companion volume to the author's *Elementary statistics and applications*, New York, McGraw-Hill Book Co., 1944, $4 00.

SNEDECOR GEORGE WADDEL

Statistical methods applied to experiments in agriculture and biology Fourth edition. Ames Ia. Iowa State College Press, 1946. 485 p illus. 23 cm. $5.00 117

Contents Introduction. Sampling of attributes. Measurement data. Comparison of individuals Sampling from normally distributed population The comparison of two groups Short cuts and approximations. Linear regression. Correlation. Large sample methods. Enumeration data with more than one degree of freedom. Analysis of variance in two or more groups of measurement data. Analysis of variance with two or more criteria of classification. Covariance.

Multiple regression and covariance. Curvilinear regression. Individual degrees of freedom. Binomial and Poisson distributions. Design and analysis of samplings. Index of mathematical tables. General index and index of symbols.

Note: (181) Those pursuing or preparing to pursue research work in the agricultural and biological sciences are the special audience for whom this manual of the theory and application of statistical methods applicable to biological experimentation is intended. Although intended for professional scientists, the treatment does not assume an extensive knowledge of advanced mathematics. In the present edition, the text has been largely rewritten. The arrangement of the chapters is the same, but their contents, method of presentation, and the examples are all changed. The work is now wider in scope; greater emphasis has been placed on the theoretical conditions in which the various statistical methods have validity. Estimation and fiducial statements have been brought into equal prominence with tests of hypotheses. There is increased reliance upon experimental samplings to exemplify distribution theory. The treatment of correlation and of experimental designs has been expanded and the methods for disproportionate subclass numbers have been extended.

WALD ABRAHAM

Sequential analysis. New York John Wiley & Sons Inc., 1947 212 p illus. 24 cm. $4 00 118

Contents. Part I, General theory Elements of the current theory of testing statistical hypotheses. Sequential test of a statistical hypothesis—general discussion. The sequential probability ratio test for testing a simple hypothesis H_0 against a single alternative H_1. Outline of a theory of sequential tests of simple and composite hypotheses against a set of alternatives. Part II, Application of the general theory to special cases. Testing the mean of a binomial distribution (acceptance inspection of a lot where each unit is classified into one of two categories). Testing the difference between the means of two binomial distributions (double dichotomies). Testing that the mean of a normal distribution with known standard deviation falls short of a given value. Testing that the standard deviation of a normal distribution does not exceed a given value. Testing that the mean of a normal distribution with known variance is equal to a specified value. Part III, The problem of multi-valued decisions and estimation. The choice of a hypothesis from a set of mutually exclusive hypotheses (multi-valued decision). The problem of sequential estimation. Appendices. Index.

Note A presentation of the theory of the sequential probability ratio test, a test which was devised by the author and first described in a restricted report submitted by the Statistical Research Group of Columbia University to the National Defense Research Committee in September 1943, and which was subsequently the subject of further research by the Group and the basic content of several reports. The exposition here is intended for professional statisticians and for other persons concerned with statistical interpretation of samples and experimental data. Theory and application are discussed; and in the third part of the book the possibility and problems of extending the theory to multi-valued decisions are explored briefly. The book is written in technical language and rather advanced mathematics.

WILKS SAMUEL STANLEY

Elementary statistical analysis. Princeton Princeton University Press 1948 284 p illus. 26 cm. Paper $2 50 119

Contents Introduction. Frequency distributions. Sample mean and standard deviation. Elementary probability. Probability distributions. The binomial distribution. The Poisson distribution. The normal distribution. Elements of sampling. Confidence limits of population parameters. Statistical significance tests. Testing randomness in samples. Analysis of pairs of measurements. Index.

Note: A new textbook that has been written for use in short introductory courses in the application of statistics. The treatment assumes that the student will have taken a course in elementary mathematical analysis. The first three chapters deal with terminology and with the description of samples. The remainder of the book is devoted to probability theory and to specific statistical techniques of wide application, especially in scientific work.

TOPOLOGY

MORSE, MARSTON

Topological methods in the theory of functions of a complex variable Princeton N J Princeton University Press 1947 145 p. illus. 23 cm (Annals of mathematics studies. No 15) Paper $2 25 120

Contents Pseudo-harmonic functions. Differentiable boundary values. Interior transformations. The general order theorem. Deformations of locally simple curves and of interior transformations.

Note This volume contains the revised form of a set of mathematical lectures delivered at Princeton University in 1945. The material is based mainly on joint research by the author and Dr Maurice Heins. The advantages of geometric methods as a complement of other methods used in dealing with function theory are emphasized. The work is intended for graduate students in mathematics and for mathematicians.

RADÓ, TIBOR

Length and area. New York American Mathematical Society 1948 572 p. illus. 26 cm. (American Mathematical Society Colloquium publications. Vol xxx) $6 75 121

Contents (abridged) Part I, Background material Background in topology Background in analysis. Part II, Curves and surfaces Continuous transformations of Peano spaces. Cyclic decomposition The topological index. Part III, Arc length and related topics Interval functions. Bounded variation and absolute continuity Arc length. Part IV Plane transformations: Topological foundations. Metric foundations. Derivatives and Jacobians. Special classes of transformations. Part V Surface area. The lower area $a(S)$ The Lebesgue area $A(S)$ Surfaces of the form $z = f(x, y)$ Bibliography Index.

Note. A thorough study of the mathematical meaning of the terms "curve," "surface" "length," and "area." Its objects are to arrive at more precise definitions of these terms, to point out the problems for which solutions have not yet been found, and to explore the application to other mathematical fields of the concepts and formulas evolved. The author states that his theories are based on the fundamental ideas of Lebesgue and Geöcze. The treatise is of special interest to mathematicians working in analysis and in topology The bibliography appears to cite all of the international literature which bears on the subject.

GEOMETRY

MURNAGHAN FRANCIS DOMINIC

Analytic geometry New York Prentice-Hall, Inc., 1945 402 p. illus. 24 cm. $4.35 122

Contents Points and vectors on a line. Points, vectors, and lines in a plane. Products of plane vectors; equations of lines; area of triangle. *Points and vectors in space. Determinants and matrices.* The circle and the sphere. The parabola. The ellipse. The hyperbola. Second-degree surfaces. The general equation of the second degree in two variables. The general equation of the second degree in three variables. Answers. Index.

Note. An introduction to analytic geometry which approaches the subject from the standpoint of vectors and matrices. This new approach was particularly selected in order to more thoroughly equip the student to understand the use of vectors in physics and engineering. The author has included very lengthy explanations and over 1100 exercises. The volume is intended primarily for college students, but it could be used also in self-instruction. The author is Professor of Mathematics at Johns Hopkins University

NATHAN DAVID SOLOMON, AND OLAF HELMER

Analytic geometry New York Prentice-Hall, Inc. 1947 402 p illus. 24 cm. (Prentice-Hall mathematics series, Albert A. Bennett editor) $4 75 123

Contents: Coordinates on a line. Rectangular coordinates in the plane Angles. Loci. Lines. Circles. Coordinate transformations. Conic sections. Conic sections in arbitrary position. Higher plane curves. Families of curves. Parametric representation. Polar coordinates. Fitting of empirical data. Rectangular coordinates in space. Loci in space. Planes and lines. Formulas and tables for reference. Answers. Index.

Note: An introductory text designed for college students having background knowledge of algebra and elementary geometry The authors have made a special effort to develop *fully one idea at*

time, and have organized their material around the themes of equations of loci and loci of equations. Each chapter includes a brief summary and numerous review problems, many of which illustrate the application of analytic geometry to the solution of problems in the engineering and physical sciences.

NOWLAN FREDERICK STANLEY

Analytic geometry Third edition. New York McGraw Hill Book Company Inc., 1946 355 p illus. 22 cm. $3 00 124

Contents Introduction. Plane analytic geometry: Trigonometry. Coordinates, projection, and direction cosines. Loci and their equations. Equations and their loci. Curve plotting. The straight line. The circle. The conics. Polar coordinates. Rotation of axes. The general equation of the second degree. Tangents, normals, and chords of contact. Diameters, poles, and polars. Properties of conics. Higher plane curves. Solid analytic geometry: Coordinates, projection, and direction angles. Surfaces of revolution, cones, and cylinders. The plane and straight line. Quadric surfaces. Index. Answers.

Note. (132) A basic text for college students. The material is presented in simplified form and is so arranged that the book may be used in short or long courses. In this edition the study of plane geometry as based on the use of direction cosines, has been introduced. Illustrative problems and review exercises are included in each chapter.

PHILLIPS HENRY BAYARD

Analytic geometry and calculus Second edition. New York John Wiley & Sons Inc., 1946 504 p illus. 22 cm. $4.50 125

Contents Limits and continuity. Derivatives and differentials. Integration and summation. Algebraic equations and graphs. Determinants. Trigonometric functions. Exponential and logarithmic functions. Parametric equations. Polar coordinates. Vectors. Formulas and methods of integration. Further applications of integration. Series with real terms. Complex numbers. Space coordinates and vectors. Partial differentiation. Multiple integration. Answers to problems. Tables. Index.

Note (135) An introductory textbook for students of engineering and science. By relating the content of analytic geometry and calculus and thus combining two courses in one, the author not only has emphasized the mutual dependence of the two subjects but also has made available valuable time for use elsewhere in crowded college curriculums. Early discussion of the differential and integral provides for the use of these important mathematical notions in accompanying science courses. Changes made in this second edition include minor rewriting and rearrangement, and a new smaller format which entailed complete resetting of the type.

RANDOLPH, JOHN ADAM FITZ AND MARK KAC

Analytic geometry and calculus. New York The Macmillan Company 1946 642 p illus 24 cm. $4 75 126

Contents Coordinate systems. Functions, limits, derivatives. Derivatives and derivative systems. Applications of derivatives. Differentials, increments, and approximations. Definite integrals. Analytic geometry complemented by calculus. Trigonometric and inverse trigonometric functions. Logarithmic and exponential functions. Indefinite integration. Further applications of definite integrals. Approximations of definite integrals. Parametric equations, curvature, polar coordinates. Law of the mean, Taylor's theorem, evaluation of limits. Solid analytic geometry and partial derivatives. Multiple integrals. Table of integrals. Selected answers to problems. Index.

Note By emphasizing graphs, the authors of this work have treated calculus and analytic geometry in a way that demonstrates the fundamental concepts of each and the complementary relationships between them. The book is designed as a college textbook. Its text is arranged so that it may be used either in a survey course or a thorough course. A generous number of examples and problems is furnished.

RIDER, PAUL REECE

Analytic geometry New York The Macmillan Company 1947 383 p illus 21 cm. $3.25 127

Contents: Plane analytic geometry. Rectangular coordinates. Equation and locus. Straight line. Polynomial and power function curves. Circle. Parabola, ellipse, hyperbola. Curve sketching. Exponential and logarithmic curves. Trigonometric curves. Parametric equations. Polar coordinates. Curve fitting. Space analytic geometry: Rectangular coordinates and directions in space. Plane and line. Surfaces and curves. Tables. Index. Answers to odd-numbered exercises.

Note A mathematics text for university students in engineering and science. The book is planned for those who want a thorough preparation for later courses in calculus, and also for those who are studying analytic geometry simply for the educational and disciplinary values involved. The author's inclusion of a chapter on curve fitting is valuable and timely in view of modern demands from many fields for geometric representation of statistical data. Previous work in college algebra and trigonometry is required.

RUSINOFF SAMUEL EUGENE

Practical descriptive geometry Illustrated. Chicago American Technical Society 1947 259 p illus 22 cm. $3 50 128

Contents Introduction. Orthographic projection. Auxiliary views. Problems of point, line, and plane. Intersection of planes. Curved lines and surfaces. Intersection of planes and curved surfaces. Development of curved surfaces. Intersection of surfaces. Solution of miscellaneous problems by descriptive geometry.

Note. A thoroughly practical textbook for use in trade school and engineering college courses. It opens with a short review of mechanical drawing fundamentals, following which each principle of descriptive geometry is explained step by step. Practical applications in the automotive, aviation, machine-tool, and steel industries are shown in the illustrative examples and in the problems for students. The author is Associate Professor of Mechanical Engineering at the Illinois Institute of Technology.

UNDERWOOD RALPH SYLVESTER, AND FRED W SPARKS

Analytic geometry Boston Houghton Mifflin Company 1948 225 p illus. 22 cm. $2 75 129

Contents The co-ordinate system, with applications. The straight line. The circle. The conic sections. Simplification of equations. Transcendental curves. Rapid sketching. Polar co-ordinates. Parametric equations and special curves. Applications to three dimensions. Fundamental formulas in space. The plane and the line in space. Special topics. Answers. Index.

Note. A short textbook for use in college courses. In spite of its brevity the exposition is enlivened by many comments on applications, stumbling blocks, and other points that are not found in more formal texts.

WATTS EARLE FRANCIS AND JOHN T RULE

Descriptive geometry New York Prentice-Hall, Inc. 1946 301 p illus. 24 cm. $4 00 130

Contents Principles of orthographic projection. Fundamental problems relating to lines and planes. On the systematic solution of problems. Graphical computation. Polyhedrons. Curved surfaces. Surfaces of general form. Horizontal projection. Analytic solutions. Pictorial drawing. Simple shadows. Practical applications. Appendices. Precision in drawing. Properties of plane figures. Stereoscopic drawing. Natural trigonometric functions. Table of chords. Index.

Note. An engineering college text which stresses the practical side of the subject. It is the authors' contention that engineers should make greater use of purely graphical methods for solving technical problems. The basic projections of the point, line, and plane are given and these are followed by more complex discussions covering topics such as the representation of an equation in three variables, Cartesian coordinates, perspective, and the development of various curved surfaces. The authors are members of the faculty of the Massachusetts Institute of Technology. A set of stereoscopic slides, which more clearly show the spatial relationships of many of the diagrams used in the book, is available from the Society for Visual Education, Inc., 100 East Ohio Street, Chicago 11, Illinois.

WOLFE HAROLD E.

Introduction to non Euclidean geometry New York The Dryden Press 1945 247 p. illus 21 cm. (The Dryden Press mathemat

ics publications Edwin R. Smith, general editor) $4.50 131

Contents: The foundation of Euclidean geometry. The fifth postulate. The discovery of non-Euclidean geometry. Hyperbolic plane geometry. Hyperbolic plane trigonometry. Applications of calculus to the solutions of some problems in hyperbolic geometry. Elliptic plane geometry and trigonometry. The consistency of the non-Euclidean geometries. Appendices: The foundation of Euclidean geometry. Circular and hyperbolic functions. The theory of orthogonal circles and allied topics. The elements of inversion. Index.

Note: Although intended for college students and secondary school teachers of geometry, this introductory text contains considerable material that is of interest to those who study mathematics by themselves. The history of non-Euclidean geometry is given at some length, and a large number of problems has been supplied, not merely as practice material but as a means of presenting important concepts. Mathematically rigorous treatment of the subject is not intended. However, the reader should be familiar with Euclidean geometry and, preferably, also with calculus. A preliminary edition was issued in 1941.

WOODS, ROSCOE

Analytic geometry. Revised edition. New York. The Macmillan Company. 1948. 322 p. illus. 22 cm. $3.50 132

Contents: Part 1, Plane analytic geometry: Fundamental concepts and formulas. The line. The circle. The parabola. The ellipse. The hyperbola. Transformation of coordinates. Geometric properties of loci. Polar coordinates. Parametric equations. Simple geometric properties and constructions of conics. The second degree equation in rectangular coordinates. Part II, Solid analytic geometry: Fundamental concepts and formulas. The plane and the line. Surfaces and curves. Answers to odd-numbered exercises. Index.

Note: (159) The first ten chapters of this text are intended to contain all the material normally covered in a short introductory course in analytic geometry. The remaining five chapters, which include the basic principles of analytic geometry of space, are designed for longer college courses. Minor revisions have been made in this edition, and some topics are explained at greater length, but the general scope and arrangement remain the same as in the 1939 edition.

TRIGONOMETRY

DONNAY, JOSEPH DESIRE HUBERT

Spherical trigonometry after the Cesàro method. New York. Interscience Publishers Inc., 1945. 83 p. illus. 19 cm. $2.25 133

Contents: Introduction. The stereographic projection. Cesàro's key-triangles. How the key-triangles are put to work. Relations between four parts of a spherical triangle. Right-angled triangles. Examples of calculations. Problems. Exercises. Appendices: Spherical areas. Formulas of plane trigonometry. Index.

Note: A brief text designed to provide a practical knowledge of spherical triangles for use in such sciences as geodesy, astronomy, crystallography, and navigation. The book employs a time-saving method of deriving formulas by means of key-triangles, developed by Giuseppe Cesàro (1849–1939), Professor at the University of Liège. It includes a selection of problems completely worked out, and a number of exercises, with answers. The treatment is based on the author's ten years' experience in teaching the subject at Johns Hopkins University and Laval University.

KLAF, A. ALBERT

Trigonometry refresher for technical men. New York. McGraw-Hill Book Company Inc., 1946. 629 p. illus. 22 cm. $7.50 134

Contents (abridged): Section 1, Plane trigonometry: Angles and their measurement. Cartesian coordinates—quadrants. Graphical representation of functions—periodicity. Interpolation. Trigonometric equations. Logarithms. Slide rule. Solution of triangles. Section II, Applications of plane trigonometry: Small angles. Vectors. Navigation. Polar coordinates—complex numbers—De Moivre's theorem—series. Section III, Spherical trigonometry: Spherical triangles. Applications. Appendix. Answers to odd-numbered problems. Index.

Note: In spite of the word "refresher" in the title this book is suitable for use in home study by persons studying the subject for the first time. The exposition is mainly in question-and-answer form, and each topic is approached by easy stages. Tables of logarithms and trigonometric functions are given in the appendix.

NUMERICAL AND GRAPHICAL METHODS

DOUGLASS, RAYMOND DONALD, AND DOUGLAS P. ADAMS

Elements of nomography. New York. McGraw-Hill Book Company, Inc. 1947. 209 p. illus. 23 cm. $3.50 135

Contents: Definition and reading of scales. Scale equations. Uniform and nonuniform scales. Adjustment of scales to size. Adjustment of scale to zero point. Drafting the scale. Stationary adjacent scales. Simple alignment diagrams. The basic parallel-line diagram for the equation $U + V = W$. Substitutions. The use of printed forms. Dependent and independent variables—limits. Simple variations in chart form. Multiplication by the Type diagram. A diagram based on two parallel lines and a third slanting line. The hexagonal alignment diagram for the equation $\frac{1}{U} + \frac{1}{V} = \frac{1}{W}$. The circular nomogram for the equation $U \cdot V = W$. Compound alignment diagrams—graphical devices—analytic geometry diagrams. Index.

Note: Nomographs, popularly known as alignment diagrams, are widely used in all branches of engineering, science, and industry for the graphic presentation of mathematical laws and relationships. This volume outlines the theory behind such charts and describes the techniques of their construction. The book is intended to serve as an introduction to the subject and is written for professional engineers, scientists, business men, and students. Emphasis is placed on actual constructional problems, and several full-scale charts illustrating their application in science and business are included.

LEVENS, ALEXANDER SANDER

Nomography. New York. John Wiley & Sons Inc. 1948. 176 p. illus. 23 cm. $3.00 136

Contents: Introduction. Functional scales. Alignment charts. Alignment charts (Z charts) for the solution of equations of the form $f_1(u) = f_2(v) \cdot f_3(w)$. Other forms of equations which can be solved by a Z chart: $f_1(u) + f_2(v) = \frac{f_3(w)}{f_4(w)}$. Alignment chart for the solution of equations of the form $\frac{1}{f_1(u)} + \frac{1}{f_2(v)} = \frac{1}{f_3(w)}$. Alignment charts for equations of four or more variables of the form $f_1(u) + f_2(v) + f_3(w) = f_4(q)$. Proportional charts of the form $\frac{f_1(u)}{f_2(v)} = \frac{f_3(w)}{f_4(q)}$. Proportional charts of the form $f_1(u) + f_2(v) = \frac{f_3(w)}{f_4(q)}$. Alignment charts for the solution of equations of the form $f_1(u) + f_2(v) \cdot f_3(w) = f_4(w)$. Miscellaneous forms. Practical short-cuts in the design of alignment charts. The use of determinants in the design and construction of alignment charts. Bibliography. Index to appendix alignment charts. Appendix. Index.

Note: An excellent introduction to the construction and uses of nomograms or alignment charts. Based on material developed for use in senior elective courses at the University of Minnesota and the University of California, it is organized primarily as a textbook. However, it is suitable for self-instruction for engineers, scientists and others who make frequent use of mathematical equations. Many worked examples as well as problems for the student to work are included. The fundamentals of the subject are stressed, but the practical applications are clearly indicated.

ASTRONOMY

GENERAL

ABBOT, CHARLES GREELEY

The earth and the stars. New York D Van Nostrand Company Inc., 1946 288 p illus. 24 cm. $4 00 137

Contents Part I, The mighty universe: The heavenly bodies and their greatest enigmas. The constellations. Numbering the stars. How far away are the stars? Motions of the heavenly bodies. What are the stars? Variable stars Origin and future of the stars. Part II, Interesting astronomically related subjects: Atoms, spectra, and star conditions. The sun family the solar system. Our earth, and her neighbor, the moon. Our star the sun. The features of the sun and solar eclipses. Heat, weather power and life from sun rays. The calendar star places, and navigation. Some famous astronomers and famous instruments. Appendices. Index.

Note. One of the better examples of popularized scientific writing Astronomy and the methods of astronomers are made fascinating for the intelligent general reader by judicious selection of topics and an avoidance of abstruse terminology rather than by obvious "writing down. The first edition was published in 1929 This edition has been thoroughly revised and reasonable amount of new material added. The chapters have been rearranged and the text has been reset in larger and more readable type.

BARTON WILLIAM HENRY, JR., AND JOSEPH MARON JOSEPH

Starcraft. Second edition New York Whittlesey House, McGraw Hill Book Company Inc. 1946 250 p illus. 23 cm. $3 50 138

Contents. Starlight and sky sights. Pointing to the stars. Making your own sky charts. Meteors. Never lost with the stars. Where is the world going? Getting away out into space. Shadowing time You can make real telescope. Squinting through the magic eye of the telescope Space views. Photo-trailing the stars. Truth trailers. Do you know? Index

Note (417) Although the authors have designed this book as source of information for older children it easily captures the interest of adults as well. Mathematical and scientific terminology is eliminated and theory is supported by practical activities for the reader to carry out. New charts and photographs are included in the present revision, and there are added chapter on night-sky photography and description of simplified emergency method of navigation.

BERNHARD HUBERT JAY, AND OTHERS

New handbook of the heavens by Hubert J Bernhard, Dorothy A. Bennett, and Hugh S Rice. Revised edition. New York Whittlesey House, McGraw Hill Book Company Inc. 1948 360 p illus. 21 cm. $3.00 139

Contents Introduction to the heavens. Stars around the poles. Autumn and winter stars. Spring and summer skies. Stars of the southern sky The planets. The moon. The sun. The comets. The meteors. The asteroids. Double and multiple stars. Variable stars. Star clusters and nebulae. Rainbows, coronas, and other wonders. Units of the universe. Solar time. The art of navigation. Photography of the heavens Use of the telescope. Astronomy for the traveler. Appendices. Glossary Index

Note (418) One of the better introductions to astronomy for young people and amateur astronomers. It is written in clear interesting style and is generously illustrated with diagrams and photographs. New in this edition, whose other chapters have been but very slightly revised, are the chapters on solar time, the art of navigation, and astronomy for the traveler Five of the eleven appendices are newly added.

BOK BART JAN, AND PRISCILLA F BOK

The Milky Way Second edition Philadelphia The Blakiston Company 1945 224 p. illus. 22 cm. (The Harvard books on astronomy edited by H. Shapley and B J Bok) $3.00 140

Contents Presenting the Milky Way How an astronomer attacks the problem. The sun's nearest neighbors. Reaching out—the system takes shape. The whirling galaxy Bright and dark nebulae. The interstellar gas. The general haze. Men at work. Explorations in space. How old is the Milky Way? Postscript. Index.

Notes (418a) A semi-popular account of present-day knowledge regarding the Milky Way and of the methods and instruments which have made this knowledge possible. The dust and gas in the vast spaces between the stars, the compositions and dimensions of star clusters, and the problems related to the past and future of our galaxy are discussed. Among the many illustrations are two large-scale photographic maps of the Milky Way, recent photographs made with Schmidt cameras, and portraits of the leading scientists in the field. A new chapter summarizing the results of recent research has been added to this edition; otherwise the text appears to be the same as in the first edition.

DIMITROFF GEORGE ZAKHARIEFF, AND JAMES G BAKER

Telescopes and accessories Philadelphia The Blakiston Company 1945 309 p. illus. 22 cm (The Harvard books on astronomy edited by Harlow Shapley and Bart J Bok) $3 00 141

Contents: Light as tool. Visual telescopes. Storing light—the photographic process. Photographic telescopes. Sifting light—spectroscopy Measuring light. Instruments for solar research. Building telescope. Appendix. Index.

Note This book will be of particular interest to the amateur astronomer and telescope enthusiast. It describes the procedures used in astronomical observation and the construction and operating principles of telescopes and of instruments used for solar research, such as the spectroheliograph, spectrohelioscope, Lyot coronagraph, and the quartz monochromator. The study of light and the applications of photography to astronomy are discussed at length. Some of the larger telescopes on this continent are briefly described, and information concerning the world' largest refractors is tabulated in the appendix.

HARVARD UNIVERSITY OBSERVATORY

Centennial symposia. December, 1946. Cambridge Mass Published by the Observatory 1948 385 p illus. 23 cm. (Harvard Observatory monographs No 7) $5.00 142

Contents. Preface, by Harlow Shapley I, Symposium on interstellar matter Interstellar absorption in our own and other galaxies, by J Stebbins Color effects in reflection nebulae, by C. Schalén. Stars in diffuse nebulae, by J. L. Greenstein. Surface photometry of line emission in nebulosities, by J. G. Baker Dimensions and masses of dark nebulae, by B. J. Bok. Evolution and physics of solid particles, by H. C. van de Hulst. The formation of cosmic clouds, by L. Spitzer Jr Kinetics of cosmic clouds, by F L. Whipple. II, Symposium on electronic and computational devices of interest to astronomers: The adaptation of photoelectric devices to the properties of the electron, by G. E. Kron. Infrared detectors and their astronomical applications, by A. E. Whitford. Electronic and electromagnetic measuring, computing and recording devices, by W J Eckert. III, Symposium on eclipsing variables: The royal road of eclipses, by H. N Russell. Spectrographic studies of eclipsing binaries, by O. Struve. The spectrophotometric determination of relative luminosities of components in two-spectra binary systems, by

R. M. Petrie. The relative frequency of low luminosity eclipsing binaries, by H. Shapley. Some unsolved problems in the theory of eclipsing variables, by Z. Kopal. IV Symposium on the gaseous envelope of the earth. The solar corona and ultraviolet radiation, by L. Goldberg and D. H. Menzel. Solar activity, by W. O. Roberts. The ionosphere, by J. H. Dellinger. Earth-sun relationships, by D. H. Menzel. The gas and conditions in the upper atmosphere, by H. T. Stetson. Meteors and the upper atmosphere, by F. L. Whipple. Solar activity, the ozone layer and the lower atmosphere, by B. Haurwitz. Solar activity and the general circulation of the lower atmosphere, by H. C. Willett. Index.

Note. A collection of papers which were presented at four symposia held in honor of Harvard University's 100th year of active astronomical research. The symposia were held under the auspices of the American Astronomical Society. Most of the papers were written by professional astronomers and they are addressed to graduate workers in the science. They are accompanied by short lists of pertinent literature, and there is a general index to the entire volume.

PENDRAY, GEORGE EDWARD

Men, mirrors and stars. Revised edition. New York, Harper & Brothers, 1946. 335 p. illus. 21 cm. $3.00 143

Contents (abridged): Part I, How men became acquainted with the universe: Astronomy's progress before the invention of the telescope. How the first telescopes came to be made and what followed. Astronomy's advances go hand in hand with improvement in telescopes. The battle of the telescopes, and what came of it. The camera and the spectroscope become handmaidens of the telescope. Part II, The instruments that explore the stars: Something about light and how the telescope makes use of it. The ancient art of glassmaking, and the modern art of making telescopes. Instruments that help measure and interpret what the telescope sees. Part III, Astronomy's march continues—the instruments of today: Today's eyes of the earth—the great observatories and their telescopes. Some famous American telescope-makers and their work. New instruments—the Schmidt camera and the coronagraph. The 200-inch at Mt. Palomar—the world's greatest telescope adventure. Appendices. Index.

Note: (445) A standard book for general readers. Its chief topic is the history of telescopes, but many allied topics are discussed incidentally. In preparing this edition material was added on new developments, such as the Schmidt camera and the Harvard coronagraph. Also the appendix, in which are listed the major observatories of the world, their personnel and instruments, has been completely revised.

PICKERING, JAMES SAYRE

The stars are yours. New York, The Macmillan Company, 1948. 264 p. illus. 21 cm. $3.95 144

Note: A miscellany of information regarding the sun, moon, stars, planets, comets and other units of our solar system, which will appeal to laymen and amateurs who are beginning the study of the stars. The greater part of the volume consists of fifteen charts of those stars of the northern hemisphere which are visible to the naked eye. Each chart is accompanied by brief descriptions of the size and position of the constellations and their stars, and an indication of the dates when they may be most readily observed. Facts concerning star names and their meanings, star magnitudes, and a survey of the constellations of the southern skies are summarized in the appendix.

ROSEN, EDWARD

The naming of the telescope. Foreword by Harlow Shapley. New York, Henry Schuman, 1947. 110 p. illus. 19 cm. $2.50 145

Contents: Foreword by Harlow Shapley. The statement of the problem. The attribution to Cesi. First witness for Cesi: John Baptist Della Porta. Della Porta's letter of attribution. Second witness for Cesi: John Faber. The unveiling of the term telescope. Cesi's own testimony: "Nostro telescopio." Jerome Sirturi. Julius Caesar Lagalla. The attribution to Demisiani. John Demisiani. Was Cesi the true author of Faber's attribution? Conclusions. The growth of the rival traditions. Joseph Mancini and the origin of the term cannocchiale. Abbreviations. Notes. Index.

Note: When in 1610 Galileo was first writing about the newly invented device for viewing distant objects, he used the Latin terms *organum*, *instrumentum*, *perspicillum*, or the Italian *occhiale*. Some of his countrymen employed the latter; others preferred *cannone*, from which was evolved the combination *cannocchiale*. But all these designations were promptly superseded by a new and more distinctive word from the Greek, *telescopio*, which was adopted by Galileo and which has been variously attributed to him and to others. The question of who originated the word is the subject of the present study. It is a story of conflicting claims which the author has evaluated by much research into books and correspondence dated three and a half centuries ago.

RUFUS, WILL CARL, AND HSING-CHIH TIEN

The Soochow astronomical chart. Ann Arbor, University of Michigan Press, 1945. 24 p. illus. 29 × 28 cm. (obl.) $2.50 146

Contents: Introduction. Translation of the text. The star map. Tables I–VI, with translations and explanations.

Note. The chart named in the title of this book is one of several stone engravings made in the 13th century in the Wên Miao temple (Confucian Temple of Literati) near Soochow, Kiangsu, China. In this volume the chart and the accompanying text are reproduced from a rubbing; a translation of the text is given; and there is a discussion of the star map, which is shown to have been devised for astrological rather than astronomical purposes.

STERNS, MABEL

Directory of the astronomical observatories in the United States. Ann Arbor, J. W. Edwards, 1947. 162 p. illus. 21½ cm. $3.00 147

Contents: Observatories other than those of astronomical societies. Observatories of astronomical societies. Addenda. Geographical list (index). Observatories of the near future.

Note. For each observatory, college-, university-, group-owned, or private, the compiler gives the name, location, and ownership, plus a brief statement, where possible, describing the equipment used, the type of housing, date of construction, and the principal uses of the observatory. Photographs of many of the observatories are included. The book is intended for both professional and amateur astronomers. A list of principal sources from which the compilation was derived is provided.

THOMPSON, ALLYN JOSEPH

Making your own telescope. Cambridge, Mass., Sky Publishing Corporation, 1947. 211 p. illus. 22 cm. $3.50 148

Contents: Story of the telescope. Materials and equipment. Mirror grinding. The pitch lap. Polishing—testing—correcting. The paraboloid. The diagonal. Tube parts—alignment—the finder. Eyepieces and related problems. The mounting. Aluminizing and cleaning. Setting circles—equatorial adjustment. Optical principles—atmosphere—magnitudes. A second telescope. Appendix A: Secondary reflections. Appendix B: Making an optical flat. Appendix C: Bibliography. Index.

Note. For a number of years the author has taught classes in telescope making for the Amateur Astronomers Association at the Hayden Planetarium in New York. The present work is based on this experience. No complicated mathematics are employed and no previous knowledge of optics or astronomy is required in order to follow the explicit directions given here for making a satisfactory reflecting telescope that will make visible twelfth magnitude stars and terrain features on the moon which are as small as one mile across.

TEXTBOOKS

BAKER, ROBERT HORACE

Astronomy: a textbook for university and college students. Fourth edition. New York, D. Van Nostrand Company, Inc., 1946. 461 p. illus. 24 cm. $4.25 149

Contents: Aspects of the sky. The earth in motion. Time and place. Light and the telescope. The moon. Eclipses of the moon and sun. The solar system. The other planets. The sun. The stars. Variable stars. Binary stars. Stellar atmospheres and interiors. Interstellar clouds and haze. Star clusters. The galactic system. Extragalactic systems. Reference books. Index.

Note: (434) Used chiefly as a textbook in introductory college courses, this work is suitable also for elementary reference work and general reading. Most topics are treated succinctly, hence a good deal of ground is covered. The illustrations are numerous and well selected. In this edition, the text has been thoroughly revised and rearranged.

DUNCAN, JOHN CHARLES

Astronomy, a textbook. Fourth edition. Illustrated. New York Harper & Brothers, 1946 500 p. illus. 24 cm. $4.50 150

Contents The celestial sphere. Optics of the telescope. The earth and the sky Celestial navigation. The orbital motion of the earth. The moon Eclipses of the sun and moon. Spectroscopy The sun. The paths of the planets The law of gravitation. The planets Meteors and comets. Theories of the evolution of the solar system. The stars—their classification, distance, and brightness. The motions of the stars Physics of the stars. Stars of varying brightness Star clusters and nebulae. The galactic system. Beyond the Milky Way Tables. Index.

Note. (438) The first edition of this book appeared in 1926 and it has since held its place as one of the leading textbooks. Although it is intended for college students who are beginning the study of the subject and no previous training in physics is assumed, it is not superficial treatment. Rather it provides sound descriptions and explanations of the basic astronomical knowledge and of the major instruments and techniques of modern astronomy An unusual feature is the descriptions of reference aids such as star catalogues. The chapter on celestial navigation is new in this edition, and there are minor revisions elsewhere. The type was reset for this edition.

HERGET, PAUL

The computation of orbits. Cincinnati The author 1948 177 p. illus. 28 cm. U.S $6.25 foreign countries, $6 45 151

Contents Introduction. The calculus of finite differences. Problems in spherical astronomy The problem of two bodies The method of Laplace. The methods of Gauss and Olbers. Improvement of the orbit. Special perturbations. Hansen's method of general perturbations Tables. Index.

Note. Although designed as an introductory textbook, this work provides detailed presentation of modern methods for the computation of orbits, especially the orbits of minor planets; and, in addition, seven useful tables, which include an "optimum interval" table which gives $1/r^3$ with the argument r^2 and has been made for use with calculating machine. In fact, throughout the book the author has assumed that the computations will be largely carried out on calculating machine of the desk type. Readers are presumed to have had courses in differential and integral calculus. The chapter on the calculus of finite differences is introductory The author is Professor of Astronomy in the University of Cincinnati and Director of the Cincinnati Observatory

RUSSELL HENRY NORRIS AND OTHERS

Astronomy a revision of Young's Manual of astronomy Volume I The solar system revised edition by Henry Norris Russell, Raymond Smith Dugan John Quincy Stewart. Boston Ginn and Company 1945 470 p illus (part col d) 23 cm. $4.25 152

Contents Astronomical systems of measurement. Astronomical instruments. Problems of practical astronomy The earth as an astronomical body The orbital motion of the earth. The moon. The sun Eclipses. The planets in general Celestial mechanics. The terrestrial and minor planets. The major planets. Comets and meteors; origin of the solar system. Appendix Numerical data. Index to names. Index to subjects.

Note (439b) A standard American textbook for advanced students of astronomy The treatment assumes knowledge of mathematics and physics at the first year college level This edition has not been enlarged, but advances in astronomical knowledge since 1926, as revealed by search of the literature of the subject, have been incorporated into the text. Such additions relate to improved methods of navigation, the internal constitution and age of the earth, new information concerning planets and their satellites, comets and meteors. Advanced topics, which may be omitted in short course, are now set in smaller type. Volume two, which deals with astrophysics and stellar astronomy and which continues the pagination of this first volume, was revised in 1938

SKILLING WILLIAM THOMPSON AND ROBERT S RICHARDSON

Astronomy Revised edition. New York Henry Holt and Company 1947 692 p illus. (part col d) 22 cm. $4 90 153

Contents: The purpose of astronomy The earth in astronomy Locating stars on the celestial sphere. Time and the calendar Celestial navigation. The astronomer's equipment and its use. The solar system. The moon. Eclipses of the sun and moon. The tides. Light, atoms, and spectrum lines. The sun considered as star. The terrestrial planets. The major planets. Comets and meteorites. Star distances. Differences among the stars. The real motions of stars. The source of stellar energy Galactic nebulae and other interstellar material. Galaxies. Appendix. Index. Star maps.

Note: (440) A well written and straightforward introduction to the elements of astronomy prepared for first-year college courses in the subject whose purpose is cultural rather than technical. The extensive rearrangement and rewriting of much of the material in this edition is based on recommendations of teachers who have used the book. New chapters discussing the purpose of astronomy and the methods of celestial navigation have been included, the sections dealing with the physical nature of the sun and planets and the source of stellar energy have been expanded, and several star maps have been added.

PRACTICAL ASTRONOMY

HOSMER, GEORGE LEONARD

Practical astronomy a textbook for engineering schools and a manual of field methods. Fourth edition revised and rewritten by James M. Robbins. New York John Wiley & Sons Inc., 1948 355 p illus. 22 cm. $4.50 154

Contents: Part I, Fundamental principles of practical astronomy: The celestial sphere—real and apparent motions. Definitions—points and circles of reference. Systems of coordinates on the sphere. Relation between coordinates. Measurement of time. Ephemerides—star catalogues—interpolation The earth's figure—corrections to observed altitudes. Description of instruments. The constellations—star identification. Part II, Engineering astronomy: Observations for latitude. Observations for time and longitude. Observations for azimuth. Tables. Greek alphabet. Abbreviations used in this book. Symbols used in this book. Appendix Spherical trigonometry

Note An introductory text that is designed for students who will take only short course in the subject. It outlines the theory and procedures of astronomical observations and calculations, and their practical applications in such fields as surveying, civil engineering, time measurement, and gives descriptions of the major instruments used in such observations. The work has been rather extensively revised in this edition.

NASSAU JASON JOHN

Practical astronomy Second edition. New York McGraw Hill Book Company, Inc. 1948 311 p. illus. 23 cm. (McGraw Hill astronomical series Edward Arthur Fath, consulting editor) $5 00 155

Contents (abridged) Part Fundamental principles and ordinary determinations of time, latitude, longitude, and azimuth. Astronomical systems of coordinates The astronomical triangle. Time and longitude. The *Nautical almanac*. Conversion of time. Instruments. Latitude. Azimuth. Part II: Precise determination of azimuth, time, longitude, and latitude. Secular and periodic changes, the *American ephemeris and nautical almanac*, star catalogues. Determination of time by the transit instrument. The zenith telescope. Determination of latitude and longitude by equal altitudes Appendix A. Formulas relating to spherical trigonometry Appendix B. Interpolation. Tables. Forms. Star maps. Index.

Note (447) An established textbook for college students of civil engineering, which will be of interest also to graduate civil engineers and surveyors who need survey of new instruments and techniques Compared to the first edition (1932) the present edition has been rearranged and extensively rewritten. One chapter is now devoted to the equilateral-prismatic and the Willis pendulum astrolabes.

SUN AND SOLAR SYSTEM

BABCOCK HAROLD DELOS AND CHARLOTTE E MOORE

The solar spectrum λ 6600 to λ 13495 Washington D C. Carnegie Institution of

Washington, 1947 95 p 29 cm. (Carnegie Institution of Washington Publication 579) Paper $1 40 cloth, $2 00 156

Contents: Introduction. Instruments. Wave lengths in table A. Intensities in the spectrum of the solar disk. Intensities of atmospheric lines. The separation of atmospheric lines. Intensities of lines in sunspot spectra. Identification of solar lines. Excitation potentials. Fraction of background radiation removed by solar absorption lines. Comparison of table A with the Utrecht photometric atlas. Comparison of infrared solar data with the spectra of some other stars. Elements recognized in the solar spectrum. Suggestions for further work. Acknowledgments. Symbols, abbreviations, and definitions. Table A Infrared solar spectrum. Bibliography

Note A report of research and tabulation of spectrographic measurements made of the solar disk, spots, and chromosphere for the infrared wavelengths. Discussion of the methods used and results obtained as well as comparison of the work with that of other investigators is made. The authors' aim has been to provide information which will assist scientists in clarifying the nature of the solar atmosphere, star spectra, and the behavior of atoms and molecules.

STETSON HARLAN TRUE

Sunspots in action. With a foreword by Sir Edward V Appleton. New York The Ronald Press Company, 1947 252 p. illus. 22 cm. (Humanizing science series edited by Jaques Cattell) $3.50 157

Contents (abridged) Atomic energy and the sun. The solar powerhouse. Metering sunlight. Sunspots and radio communication. Sunspots, the earth's magnetism, and the northern lights. Radio, solar eclipses, and cosmic effects. The origin of sunspots. Predicting sunspots. Sunspots, weather and living things. Sunspots and the economic cycle. Sunspots, the radio industry and the F.C.C. Cosmic terrestrial research. Appendices: Bibliography Tables of relative sunspot numbers. Name index. Subject index.

Note: An easy-to-read book in which the current knowledge of the origin and nature of sunspots and of their effects upon the earth and its inhabitants is summarized and discussed. Some of the more plausible hypothetical material is included also The book is intended for educated laymen, and is therefore written without mathematics and in only semi-technical terminology However scientists, particularly those in other fields than astronomy will find it informative and perhaps useful. The bibliography is arranged by chapters and refers chiefly to scientific papers and other literature for scientists.

STARS

HILTNER, WILLIAM ALBERT AND R. C WILLIAMS

Photometric atlas of stellar spectra. Ann Arbor University of Michigan Press 1946 24 p. 19 cm. $7.50 158

Contents (abridged): Book I, Introduction. Microphotometric analysis. Use of the atlas. Spectrographic data and dispersion tables. Book II, Bootis K2 pec. Book III, Cygni A2 Ia. Book IV β Orionis B8 Ia. Book Lyrae A0 V Book VI, Canis majoris A1 V Book VII, Canis minoris F5 IV Book VIII, Persei F5 Ib. Book IX, Orionis M2 Ib.

Note: In this important contribution to astrophysics, intensity tracings of the spectra of the stars named above are reproduced from the original tracings made by the direct-intensity microphotometer owned by the University of Michigan. The spectra were photographed with Coudé spectrograph of the 82-inch reflector at the McDonald Observatory of the University of Texas, and were analyzed over considerable range of wave lengths. The stars covered were selected so as to cover large range of brightness. The tracing for each of the eight stars chosen for study is presented in separate booklets, enclosed in portfolio. Methods and instruments which were employed are described in the introductory booklet.

KOPAL, ZDENĚK

An introduction to the study of eclipsing variables. Cambridge Mass. Harvard University Press 1946 220 p. illus. 23 cm. (Harvard Observatory monograph. No. 6) $4 00 159

Contents: Foreword, by Henry Norris Russell. Nature of the eclipses. Determination of the elements. Improvement of preliminary elements and determination of limb-darkening. Effects of orbital eccentricity The equilibrium of distorted stars. The effects of ellipticity and reflection. Theoretical light curves of close eclipsing systems within solutions. Determination of elements of distorted eclipsing systems. Index.

Note A critical review of the current theory of eclipsing variables. It is mainly concerned with the interpretation of data collected by photometric means, and the treatment is largely mathematical. In the early chapters simplified binary system in which two spherical components revolve around common center of gravity is assumed in order to simplify the problem. In later chapters the effects of deviations from this simplified model are considered. Each chapter is accompanied by useful annotated list of the related literature.

PIERCE NEWTON LACY

A finding list for observers of eclipsing variables. Princeton N J Princeton University Observatory, 1947 63 p 31 cm. (Contributions from the Princeton University Observatory No 22) Paper $6 40 160

Note: (300) A revised and enlarged edition of list first prepared by Professor R. S. Dugan. It is prepared specifically for professional astronomers and its purpose is to provide information necessary for planning worthwhile observing program. The introduction discusses the nature of data supplied, the reasons for observing these stars, and the methods and problems of observation. In the list itself, the left-hand pages contain data on position, period and character of light variation, spectral type, etc., to aid in the selection of stars to observe; and the right-hand pages give means of identification, information about comparison stars and close companions, light elements, lists of observations and solutions Information is included about observations known to be in progress.

Burton Eli Franklin, and others

College physics by E F Burton, H. Grayson-Smith and F M Quinlan. New York Pitman Publishing Corporation 1948 724 p. illus 24 cm. $4 50 172

Contents. Part I, Mechanics. Part II, Properties of matter Part III, Wave motion. Part IV Heat. Part Electricity and magnetism. Part VI, Sound. Part VII, Light. Index.

Note In this well-written text the material has been selected for the benefit of preprofessional students rather than for students who plan to specialize in physics. The section on electricity and magnetism is fuller than it is in most texts and in it the emphasis is on electrical measurements and measuring instruments, alternating-current meters, and radio reception and transmission. The discussion of sound and sound waves contains many interesting experiments to illustrate reflection phenomena and quality of sounds. The book ends with the quantum theory and with question growing out of the experiment which indicates that cathode rays are particles.

Frye Royal Merrill

Essentials of applied physics a foundation course for technical, industrial, and engineering students. New York Prentice-Hall Inc. 1947 322 p illus. 24 cm $4.35 173

Content (abridged) Newton's laws Force—work—energy—power Fluids. Elasticity Vectors. Acceleration. Projectiles—centripetal acceleration. Dynamics of rotation. Conservation laws Simple harmonic motion. Properties of aves Sound. Heat and temperature—the two laws of thermodynamics. Expansion. Calorimetry Magnetism. Static electricity Voltaic and electrolytic cells—simple circuits. Magnetism and the electric current. Alternating currents. Radio—radar Photometry—reflection and refraction of light. Appendices. Index.

Note: A relatively short textbook intended for use in trade schools and technical institutes rather than in full-scale college courses. Topics have been selected for inclusion partly on the basis of their obvious relation to the practical world. Modern physics has been taken into account at the appropriate places in the text for example, there are discussions of the variation of mass with speed and of the wave mechanics theory of the nature of light. Each chapter is accompanied by problems for the student to solve and by short glossary of the technical terms introduced in the chapter The author is Professor of Physics in Boston University

Hausmann Erich, and Edgar P Slack

Physics Third edition New York D Van Nostrand Company Inc., 1948 793 p illus 24 cm. $5 00 174

Contents (abridged) Mechanics. Heat. Electricity and magnetism. Sound. Light. Appendix. Answers to problems. Index.

Note (515) A widely-used college textbook In principles are clearly presented and are then used to explain engineering processes and machines, as well as to devise formulas for solving practical problems In this edition considerable material has been added on new developments such as radar the betatron, and the atomic bomb and the problems supplied in the second edition have been largely replaced with new ones.

Hector, Luther Grant and others

Physics for arts & sciences by L. Grant Hector Herbert S Lein and Clifford E. Scouten. Philadelphia The Blakiston Company 1948 731 p. illus. (part col d) 22 cm $5 50 175

Contents (abridged) Part I, Mechanics, heat and sound. The scope of physics. Simple measurements The motion of objects. Machines—mechanical advantage Behavior of liquids. Behavior of gases. Forces and motion Temperature and heat Heat and work Vibratory motion—classical Wave motion—sound. Part II, Electricity optics and nuclear physics. The discovery and nature of electricity Electric power and energy Electrolysis Magnetism. Electric meters and motors Inductance and alternating current Electron tubes. X-rays The nature of light Some applications of mirrors and lenses. Infra-red and ultra-violet Photoelectricity Natural radioactivity and transmutation of elements Index.

Note: An elementary text for use by college students with no previous knowledge of the subject. Mathematically nothing beyond simple algebra is required and the problems, grouped by difficulty are for the most part practical and theoretical rather than mathematical. Other features are two color diagrams, short summarizing introduction before each chapter and an outline of the important points at the end of each. Part II was originally published in 1941 as *Electronic physics*.

Houston William Vermillion

Principles of mathematical physics Second edition New York McGraw Hill Book Company Inc. 1948 363 p illus. 23 cm. (International series in pure and applied physics. G. P Harnwell consulting editor) $5 00 176

Content Elementary differential equations. The mechanics of particles. Linear equations of order higher than the first. Mechanics of vibrating particles. Calculus of variations. Hamilton's principle. Theory of vibrating systems. Vector analysis Dynamics of rigid bodies. Thermodynamics. Statistical mechanics The vector field. Electrostatics. Magnetostatics and the interaction of steady currents. The electromagnetic field The restricted theory of relativity Index.

Note: (548) An introductory text designed for the use of college students who have studied elementary college physics and mathematics through calculus. The fundamental laws and theories of classical physics are of necessity introduced but the emphasis is on the mathematical processes. Problems for the student to work form an integral part of the text. In this edition the chapters on electricity and magnetism have been expanded, and such topics as damped vibrations, forced vibrations, the pendulum, and non-homogeneous equations are treated at greater length. There are other changes, including the addition of considerable number of diagrams.

Howe Harley Earl

Introduction to physics. Second edition. New York McGraw Hill Book Company Inc., 1948 599 p illus 24 cm. $4.50 177

Contents (abridged) Newton's laws of force and motion. Equilibrium of particle. The effect of force on motion. Simple harmonic motion. Equilibrium of rigid body The behavior of spinning bodies. Machines and friction Forces in liquids at rest. Forces in gases at rest Vibrations and waves Sound and hearing. Heat and temperature Thermal properties of gases. Change of state. Transfer of heat radiation. The nature of electric current. Electrical quantity and electrical potential. Electric currents and magnetic phenomena. Electromagnetic induction. Electric oscillations. Ionic phenomena in gases The atomic nucleus. General properties of light. Lenses Dispersion and spectra. Diffraction and interference. Polarization. Answers to problems Index.

Note (537) An established presentation of classical physics, written chiefly for use in courses offered to students who are not preparing for professions which require rigorous knowledge of physical principles and techniques. The author's style is clear and the various topics are presented so as to hold the interest of the typical non-technical student. However not great deal of the space is given to the applications of physics. Instead, the emphasis is on the fundamental laws and phenomena. In revising the work for this edition considerable number of changes were made, all of which are described in some detail in the author's preface.

Jauncey George Eric Macdonnell

Modern physics, a second course in college physics. Third edition. New York D Van Nostrand Company Inc. 1948 561 p illus. 22 cm. $6 00 178

Contents (abridged) Historical introduction. Some useful mathematics. Wave motion. Alternating currents. Electromagnetic theory of radiation Properties of moving charged bodies. The electron. Kinetic theory of gases. Specific heats and heat radiation. Electrons in metals. The photoelectric effect. Electronics and radio. Relativity—special theory X-rays Bohr theory of spectra. The quantum theory Critical potentials. Radioactivity and isotopes. Nuclear physics. Nuclear fission. Cosmic rays. Astrophysics Relativity—general theory Philosophical implications. Appendices. Answers to problems. Index.

Note (545) A text for college courses offered to students who have had one-year courses in classical physics and in college mathematics. It is suitable both for students who merely want an understanding of modern physics for cultural purposes and for those who are preparing for professional work in chemistry or physics. In preparing this edition, some parts of the work were rearranged and

some matter that appeared in the second edition was dropped. Many passages were rewritten, and material was added on nuclear fission and on other significant developments since 1937

LEMON, HARVEY BRACE, AND MICHAEL FERENCE, JR.

Analytical experimental physics. Revised edition Chicago University of Chicago Press, 1946 588 p illus. 30 cm. $8 00 text ed., $6 00 179

Contents (abridged) Mechanics Kinematics. Dynamics of particle Mass-force. Conservation of momentum. Work and energy Rotational motion. Simple harmonic motion. Mechanics of fluids. Surface tension. II, Heat Historical résumé. Temperature and its measurements. Gas laws and the kinetic theory Latent heats and *changes of state. The transmission of heat. Thermodynamics* and heat engines. III. Electricity and magnetism Magnetostatics. Electrostatics. Electromagnetism. Ohm's law; Resistance. Conduction of electricity through liquids: electric cells. Direct-current instruments and measurements. Thermoelectricity Electromagnetic induction. Direct-current motors and generators. Alternating currents. Electrical measuring instruments for varying currents. Conduction through gases *Nuclear processes. Electronics.* IV Wave, motion, sound, and light: Waves on the surface of liquids Sound. Musical sounds and the science of music. Light geometrical optics. Physical optics. Polarized light. Spectroscopy: Quantum theory Mathematical appendix: Analytic geometry Trigonometry Calculus. Index.

Note: (392) An unusual textbook in both contents and format. It is designed for second year college students and covers chiefly classical physics but the student is at least introduced to the chief concepts of modern physics. The illustrations are numerous and include many sequences from moving pictures of laboratory experiments. In this edition the revision includes rewriting of the chapters on nuclear processes and on electronics, and newly added material on microwaves and their application in radar equipment. Some new illustrations have been added.

LEMON, HARVEY BRACE

From Galileo to the nuclear age an introduction to physics. Revised edition of "From Galileo to cosmic rays. Photographs by the author, drawings by Chichi Lasley Chicago Ill. The University of Chicago Press 1946 451 p. illus. 23 cm. $5.00 text edition $3 75 180

Contents (abridged) Part I, Mechanics: Galileo and the principle of inertia. Newton's first two laws of motion. Paths of projectiles. Balanced forces and Newton's third law of motion. Applications of the law of conservation of momentum Energy potential and kinetic. Power. Our two oceans—atmosphere and hydrosphere. Part II, Heat Temperature and expansion. Quantity of heat and temperature. *The kinetic theory of heat. Part III, Electricity and magnetism* Conduction, induction. Thunderstorms. Artificial production of charge. Magnetism. The energy of electric and magnetic fields. Part IV Electricity and matter Conductors, solid and liquid. The conduction of electricity by gases Cathode rays. Electrons their mass and velocity Positive rays, protons, neutrons, and isotopes. Radioactivity and transmutation. Part Waves and radiation About wave phenomena in general. On sound. *Electromagnetic* waves. Visible light. Radiation and atomic structure. Index.

Note: Although planned primarily as textbook, this work is also suitable for adult readers studying by themselves. The style is light, almost conversational, and it is supplemented by an abundance of ingeniously conceived illustrations. In comparison to the first edition, published in 1934, this one is not greatly changed except *for about twenty inserted pages on new atomic particles and* occasional paragraphs on new applications, such as radar

PERKINS HENRY AUGUSTUS

College physics. Third edition. New York Prentice Hall, Inc., 1948 786 p illus. (part col'd) 24 cm. (Prentice-Hall physics series Donald H. Menzel, editor) $6 65 181

Contents (abridged) Part I, Mechanics. Part II, Heat. Part III, Wave motion and sound. Part IV Light. Part Electricity and magnetism. Part VI, Corpuscular physics Appendix. Index.

Note. (397) An established textbook which is particularly suitable for introductory courses taken by students who are going to pursue the subject of physics further or to specialize in some branch of science where sound knowledge of physical principles is necessity. Many topics are pursued further than is customary in introductory texts and the discussion of some subjects, for example physical optics, is unexpectedly full. Some historical material is included. Although shorter in this edition than in the preceding one, there has been fair amount of revision which includes the introduction of new topics, such as radar and the revision of others, such as cosmic rays.

RICHTMYER, FLOYD KARKER, AND E. H KENNARD

Introduction to modern physics. Fourth edition New York McGraw Hill Book Company Inc. 1947 759 p illus 23 cm. (International series in pure and applied physics G P Harnwell, consulting editor) $6.00 182

Contents Historical sketch. Electromagnetic waves and moving charges. The photoelectric and thermionic effects. The theory of relativity The origin of the quantum theory The nuclear atom and the origin of spectral lines. Wave mechanics. Atomic structure and optical spectra. The quantum theory of specific heats. X-rays. The nucleus. Cosmic rays. Appendices. Index.

Note (392) The present edition of this well-established text shows only few major changes when compared to the third edition (1942) The chapter on the nucleus has been considerably rewritten and much new material on subatomic particles and nuclear fission added The chapter on cosmic rays also shows considerable expansion. The chapter on atomic structure and optical spectra has been rewritten and simplified. The other chapters and the references and illustrations show only slight alterations. As before, the work is designed for senior college students or graduate students who have completed basic college courses in mathematics and physics.

SEARS, FRANCIS WESTON

Principles of physics. Volumes II–III. Cambridge, Mass. Addison Wesley Press, Inc. 1946–48. 2 v illus. (part col'd) 24 cm. $5.50 each volume. 183

Contents. Volume II, Electricity and magnetism Coulomb's law The electric field. Potential. Current, resistance, resistivity D.C. circuits. Chemical and thermal EMF's. Properties of dielectrics. Capacitance and capacitors. The magnetic field. Galvanometers, ammeters, and voltmeters. The D.C. motor Magnetic field of current and of moving charge. Induced electromotive force. Inductance *Magnetic properties of matter Ferromagnetism. Alternating* currents. Electrical oscillations and electromagnetic waves Electronics. Index Answers to problems. Volume III, Optics: The nature and propagation of light. Reflection and refraction at plane surfaces. Reflection and refraction at spherical surfaces. Lenses. Lens aberrations. Optical instruments. Polarization. Interference. Diffraction. Limit of resolution. Line spectra. Thermal radiation. *Photometry* Color. Index. *Answers to problems.*

Note. (401) The second and third parts of college text which is particularly suited to use in introductory courses offered to students who are preparing for professional careers in fields where extensive use is made of the concepts of classical physics. It deals chiefly with principles and contains little on applications. It was prepared originally for use in the author's own two-year course at *Massachusetts Institute of Technology. The treatment assumes* that the student will be studying analytical geometry and calculus concurrently The first edition of Volume III was published in 1938 and was titled *Optics.* The second edition, listed here, contains extensive revisions which include many new illustrations.

SEARS FRANCIS WESTON, AND MARK W ZEMANSKY

College physics. Complete edition. Cambridge Mass. Addison Wesley Press, Inc. 1948 848 p. illus (part col d) 24 cm. $6 00 184

Contents (abridged) Mechanics Composition and resolution of vectors Moments—center of gravity Rectilinear motion. Motion of projectile Circular motion. Elasticity Harmonic motion. Hydrostatics. Hydrodynamics and viscosity Heat: Quantity of heat. The first law of thermodynamics. Thermal properties of matter. The *second law of thermodynamics. Sound:* Wave motion. Acoustical phenomena. Electricity and magnetism The electric field. Prop-

erties of dielectrics. Principles of electrochemistry. The magnetic field. Induced electromotive force. Magnetic properties of matter. Capacitance and inductance. Alternating currents and electromagnetic waves. Optics: The nature and propagation of light. Lenses and lens aberrations. Optical instruments. Color. Polarization. Atomic physics. Spectra and atomic physics. Radioactivity and nuclear physics.

Note. Sears' three-volume *Principles of physics* was developed for use in a thorough two-year course at Massachusetts Institute of Technology. This title represents a revision of the material in the larger work to adapt it for use in one-year courses. The work has been reduced in size and parts that required a knowledge of calculus have been revised or eliminated. There is the same emphasis on a thorough exposition of principles that characterizes the longer work.

SEMAT, HENRY

Fundamentals of physics. New York Rinehart & Company, Inc. 1945 593 p illus 24 cm. $4.25 185

Contents (abridged) Part I, Mechanics. Part II, Heat. Part III, Electricity and magnetism. Part IV Wave motion and sound. Part V Light. Appendices. Index.

Note: A textbook for the first-year course in college physics. The author has selected only topics of major importance and presented these fully in terms the average student can understand. Solutions of a number of illustrative problems are worked out in the text, with additional examples at the end of each chapter

SMITH ALPHEUS WILSON

The elements of physics. Fifth edition New York McGraw Hill Book Company Inc. 1948 745 p illus. (part col d) 24 cm. $5 00 186

Contents (abridged) Part I, Mechanics. Part II, Wave motion and sound. Part III, Heat. Part IV Magnetism and electricity. Part V Electronics. Part VI, Physical and geometrical optics. Part VII, Radiation and atomic structure. Appendices. Index.

Note (605) This textbook has been widely used in American universities and colleges since the publication of the first edition in 1923. The author's method is to impart a thorough understanding of the fundamental physical principles and phenomena by stressing their many applications. Along with the basic theory numerous descriptions and illustrations of interesting devices based on physics are included. A fair amount of new material has been added in the present edition. There is an entirely new chapter on meteorology and numerous shorter articles on recent developments, particularly in atomic physics and electronics. There are now more than nine hundred illustrations.

WEBER ROBERT L. AND OTHERS

College technical physics by Robert L. Weber Marsh W White and Kenneth V Manning New York McGraw Hill Book Company Inc. 1947 761 p illus. 23 cm. $4.50 187

Contents. The fields and uses of physics, measurement. Vectors; forces at a point. Velocity and acceleration. Force and motion. Projectile motion. Friction. Work and power. Energy. Torque. Rotation of rigid bodies. Momentum. Uniform circular motion. Vibratory motion. Elastic properties of solids. Liquids at rest. Fluids in motion. Properties of gases. Molecular theory of matter. Temperature measurement; thermal expansion. Heat quantities. Heat transfer. Thermodynamics. Meteorology. Wave motion. Sound waves. Acoustics. Magnetism. Electricity at rest. The electric current. Electric circuits. Magnetic effects of electric currents. Electric instruments. Electrical measurements. Chemical effects of electric current. Electric energy and power. The magnetic circuit. Electromagnetic induction. Generators and motors. Condensers. Alternating currents. Electronics. Light and illumination. Reflection of light. Refraction of light; thin lenses. The eye and optical instruments. Color. Dispersion; spectra. Interference of light; diffraction. Polarized light. Twentieth-century physics. Appendices. Index.

Note Although this textbook is intended for use in courses offered to students who intend to specialize in science or engineering and, therefore, includes matter that is usually not contained in survey courses or popular works, the mathematics employed have been kept simple. Algebra and trigonometry are freely used, but increment notation takes the place of more difficult calculus concepts. This feature makes the book useful as a self-instruction text for persons who have had an introductory physics course some years ago and want now to become informed about modern developments. Generous numbers of review questions and problems are provided.

WHITE, HARVEY ELLIOTT

Modern college physics. New York D Van Nostrand Company Inc., 1948 787 p. illus (part col d) 23 cm. $5 00 188

Contents: Mechanics. Properties of matter. Heat. Sound. Light. Electricity and magnetism. Atomic physics. Electronics. Quantum theory. Nuclear physics. Appendix.

Note (613) A textbook for a one-year college course intended for students planning to major in the physical or biological sciences. It is a new edition of the author's *Classical and modern physics* (New York, 1940) and has been revised, partially rewritten, and enlarged. The section on mechanics has been expanded, there are added illustrations throughout, some in color, and the emphasis has been put on new developments in atomic and nuclear physics and electronics. The application of physics to medicine and other natural sciences is stressed to a larger extent than is usual in introductory textbooks.

LABORATORY TECHNIQUES

BACHMAN, CHARLES HERBERT

Techniques in experimental electronics. New York John Wiley & Sons, Inc., 1948 252 p illus. 22 cm. $3 50 189

Content Vacuum systems generalized. Pumps. Traps and baffles. Vacuum gauges. Valves and controlled leaks. Demountable joints. Controls and gadgets. Glass-blowing fundamentals. Vacuum system techniques. Leak detection. Metal versus glass vacuum systems. Sources of charged particles. Control of charged particles. The utilization of charged particles. Assembly and processing of electronic devices. Miscellaneous hints and techniques. Index.

Note A concise but very useful book for physicists, advanced students, and even amateurs, who are doing experimental work in electronics. Chiefly it is concerned with the construction of laboratory apparatus. Much expert "know-how" is included on such problems as degassing, glass-to-metal seals, etc. Lists of references are appended to the chapters, and some suppliers of materials are mentioned in footnotes. The author was formerly on the staff of the General Electric Company and is now a member of the faculty of Syracuse University

HELDMAN, JULIUS DAVID

Techniques of glass manipulation in scientific research. New York Prentice-Hall, Inc., 1946 132 p illus. 23 cm $3 60 190

Contents Properties of glass. Flames and torches. Equipment. Basic operations. Blowing involving one piece of glass. End and T seals. The triple, ring, or inner seal. The Dewar seal. Use of the hand torch. Other operations. Glass-to-metal seals. Finished-equipment exercises. Glossary. Index.

Note. This book is designed for workers in scientific laboratories who may need to repair chemical glassware or to construct simple pieces. The author has included very detailed instructions on how to cut, bend, streak, bulge, flange, and polish glass tubing. The reader is shown, step by step, how to make elbows, tees, wyes, coils, condensers, aspirators, manometers, McLeod gauges, diffusion pumps, and other glass equipment. The glossary includes a page of information on the trade names and kinds of glass that should be used.

SMITH ARTHUR WHITMORE

Electrical measurements in theory and application. Fourth edition New York McGraw Hill Book Company Inc. 1948 371 p. illus 23 cm. $4.25 191

Contents: Introduction. General principles. Ammeter and voltmeter methods. Ballistic-galvanometer and condenser methods. The current galvanometer. The Wheatstone bridge. Potentiometer and standard-cell methods. Measurement of current. Measurement of power. Electron tubes. The magnetic circuit. Measurement of magnetic flux and Mmf. Magnetic tests of iron and steel. Alternating currents. Measurement of capacitance. Inductance. Measurement of inductance. Calibration of alternating-current instruments. Index.

Note: (713) A standard manual of fundamental methods and instruments. It is designed for use in connection with college

course, but the relatively full discussions of principles make it suitable for self-instruction and reference use also. The treatment assumes that readers will be familiar with elementary college physics and mathematics. In comparison to the third edition (1934) this edition exhibits many small changes, most of which expand or clarify the exposition. The type has been reset.

SMITH, FRANCIS ALBERT, AND OTHERS
Tests of instruments for the determination, indication, or recording of the specific gravities of gases, by Francis A. Smith John H. Eiseman and E. Carroll Creitz. Washington D C. Government Printing Office 1947 143 p. illus. 24 cm. (United States. National Bureau of Standards. Miscellaneous publication M177) $1.00 192

Contents: Introduction History of the project. Definitions. Equipment Laboratory facilities. Test gases. Instruments studied. Plan of the tests: Methods. Corrections applicable and their evaluation. Results of tests of individual instruments. Pressure balances. Acme portable gas balance. Ac Me recording gravitometer no. 171 Acme recording gas gravitometer Ranarex recorder no. 7 for specific gravity. Metric indicating gravitometer Ranarex specific gravity recorder no. A1340 and portable specific gravity indicator no. P1734. Fisher densitometer (experimental model) Discussion Interpretation of the results of the tests.

Note: Preface: At the request of the American Society for Testing Materials, critical study was made [by the National Bureau of Standards] of the commercial instruments for the determination of the specific gravities of gases. Eleven different instruments were studied with the use of 13 test gases of known specific gravities. Determinations were made of the accuracy and reproducibility of the effects of changes of temperature, relative humidity and water content of the surrounding air, and of sources of error and applicable corrections. It is believed that the results herein presented will be of considerable value to those requiring accurate data on the specific gravity of gases.

THOMAS, JAMES LOUIS
Precision resistors and their measurement. Washington D C. Government Printing Office, 1948 32 p illus. 26 cm. (United States Bureau of Standards. National Bureau of Standards circular 470) Paper $0.20 193

Contents: Introduction. Resistance materials and construction methods. Methods of comparison of resistors. Special apparatus for precision measurements. Calibration of precision bridges. Resistivity of solid conductors. References.

Note: The Wheatstone bridge in one or another of its several forms is almost universally used in scientific investigation when accurate measurement of electrical resistance is required. This circular supplies information on the use and practical limitations of resistance measuring bridges for persons interested in accurate measurement of electrical resistance. It also presents methods for the direct-current calibration of such bridges, the methods discussed being those regularly used at the National Bureau of Standards when an accuracy of 0 01 percent or better is required.

WEIGHTS AND MEASURES

BENDICK JEANNE
How much and how many the story of weights and measures. New York Whittlesey House McGraw Hill Book Company Inc. 1947 188 p illus. 21 cm. $2.25 194

Contents: How much and how many Some things to remember Trade: Shipping and commerce: avoirdupois weight Money jewels and precious metals; Troy weight. Apothecary weight and liquid measure. The things we wear. Building. Printing. Science Electricity light and heat, radio, and mechanics. Time. Navigation. Weather Surveying. Cooking. Medicine. Photography Guns and ballistics. The metric system. The National Bureau of Standards. Tables of weights and measures. Bibliography Index.

Note: Young and old will find this book on the origin, history and current meaning of terms commonly used in the United States in counting and measuring commodities of all kinds, fascinating to read and useful for reference. It answers the innumerable questions concerning customs and terms about which most have wondered, in style that is appropriately elementary and factual. However accuracy and the use of technical terminology with careful definitions, are not sacrificed to simplicity

THE NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS
Twentieth yearbook The metric system of weights and measures. Compiled by the Committee on the Metric System. New York Bureau of Publications Teachers College Columbia University 1948 303 p illus. 24 cm. $3 00 195

Contents (abridged) System in measures: The metric system—what it is and why we need it, by C. J. Arnold. Weights and measures through the ages, by J. O. Hassler(?). Is all this really necessary? by C. Pollock. The early history of the metric system, by E. W. Schreiber Later trends in metric usage, by J. J Urbancek. The system at work The metric system in chemistry, by H. W Baker The metric system in meteorology by C. F Brooks. The metric system in electrical engineering, by A. E. Kennelly The metric system in mechanical engineering, by L. Elliott. The metric system in automotive engineering. The metric system in metalworking, by T H. Miller The international system in research and development engineering, by A. R. Smith. The metric system in merchandising, by H. I. Kleinhaus. The metric system in medicine, by A Smith. Metric and avoirdupois in the drug industry by E. V Meth. The metric system from the Pan-American standpoint, by W C. Wells. The metric system and the armed forces, by G. R. Martin, Jr. The metric system—an Anglo-American opportunity by H. Allcock. An auxiliary system for the measurement of time, by F J. Moles. Decimalization of English measures and computation with approximate data, by C. N Shuster. The metric system in science education, by P G. Johnson. Appendix: Relationship between the inch and millimeter by R. E. Hanson. Convenient ways to use equivalent tables.

Note An organized plea for adoption of the metric system of weights and measures in the United States. The volume contains original essays and reprints of magazine and newspaper articles by many contributors who describe advantages of the metric system and discuss ways of securing its official adoption.

MECHANICS

CAMPBELL, JOHN WILLIAM
An introduction to mechanics. New York Pitman Publishing Corporation 1947 372 p illus. 24 cm. $4.50 196

Contents: Rectilinear kinematics. Vector quantities. Plane kinematics. Particle dynamics. Centers of mass. Plane statics. Some properties of matter. Miscellaneous topics. Moments of inertia. Plane motion of rigid body Flexure and torsion. Kinematics of plane motion of rigid bodies Further conditions for equilibrium. Flexible chains and cables. The general motion of rigid body Gravitation. Lagrange's equations. Appendices: Principles of computation. Elementary calculus. Definite integrals. A useful reduction integral. Simpson's rule. Hyperbolic functions. Bracketing. Tables Answers. Index.

Note. A textbook suitable for use in rigorous courses offered to students in engineering colleges. Mathematical methods involving the use of ordinary and vector calculus are explained. Worked examples are incorporated in the text and there are additional problems for students to solve. The author is Professor of Mathematics at the University of Alberta.

COLE ROBERT HUGH
Underwater explosions. Princeton N J Princeton University Press, 1948 437 p. illus. 24 cm. $7.50 197

Contents: The sequence of events in an underwater explosion. Hydrodynamical relations. The detonation process in explosives. Theory of the shock wave. Measurement of underwater explosion pressures. Photography of underwater explosions. Shock wave measurements. Motion of the gas sphere. Secondary pressure waves. Surface and other effects. Appendix: Approximations in the propagation theory of Kirkwood and Bethe. Bibliography Index.

Note In this book the fundamental knowledge of the subject is presented anew on the basis of extensive research carried out by

various groups under contract with United States Government units in the years 1941 1946. The treatment is largely theoretical, with considerable attention given to the basic hydrodynamical principles and phenomena. However the equipment and methods used in carrying out the experiments are also described. Data that are still restricted for reasons of military security are of course not included. The work is intended for persons engaged in similar work, graduate physicists, and engineers.

CURRIER ALBERT ELDRED

Analytic mechanics prepared for the Department of Mathematics of the United States Naval Academy Annapolis The United States Naval Institute 1948 306 p illus 24 cm. $4 75 198

Contents Introduction. Components, sums, moments and equilibrium f forces in the plane. Physical significance of system of forces in equilibrium, and applications to statics problems. Trusses. Equivalent forces, equivalent systems of forces and resultants. Resultant of gravity forces, center of gravity center of mass, centroids. Moment of inertia. Normal force and force of friction. Strength of materials, and beams. Plane dynamics of particle. Work, energy and potential functions. Motion of system of particles. Impulse and momentum, impulsive forces. Index.

Note. This text has been designed specifically to fit in with the program of studies offered midshipmen t the United States Naval Academy and to meet the requirements of that institution. The scope and level of difficulty is that of the average introductory college text in mechanics, and requires knowledge of mathematics through elementary calculus. Each chapter includes numerous exercises and problems which illustrate the practical applications of the preceding theoretical discussions.

DEN HARTOG JACOB PIETER

Mechanics New York McGraw Hill Book Company Inc. 1948 462 p. illus. 23 cm. $4.50 199

Contents: Discrete coplanar forces. Conditions of equilibrium. Distributed forces. Trusses and cables Beams Friction. Space forces. The method f work. Kinematics of point. Dynamics of particle. Kinematics of plane motion. Moments of inertia. Dynamics of plane motion. Work and energy Impulse and momentum. Relative motion. Gyroscopes Problems. Answers to problems. List of equations. Index.

Note. Although this new textbook is meant to be used in what the professors call "rigorous courses, it is well organized, reasonably short, and the weight of the exposition is lessened every now and then by touches of humor Skeptical readers can sample the latter quality by reading the discussion of the pipe wrench and the automobile brake on pages 91–94. The work is designed for use in courses offered to sophomore or junior engineering college students. It ill be of some use in libraries as fuller and more advanced treatment of mechanics than is found in physics textbooks.

GIRVIN, HARVEY FRANK

A historical appraisal of mechanics Scranton Pa. International Textbook Company 1948 275 p illus. 23 cm. $4 75 200

Contents: Foreword, by A. A. Potter Part I, The creation of science and scientific thinking Introduction. Early Greek philosophy Medieval period, 800–1500. Part II, Scientific thought begins to function The Renaissance, 1400–1600 The beginning of the modern period. Dynamics, the science of motion Period between Galileo and Newton. Isaac Newton, 1642–1727 Work of Newton contemporaries and followers. In retrospect. Part III, Mechanics of materials. Pre-elastic development Theory of elasticity Post Saint Venant period. Mechanics and engineering education in the United States. The nineteen-forties Appendices Index.

Note An easy-to-read account of the gradual development of man's knowledge of physical mechanics. It is intended to provide udents and interested laymen with critical survey and considerable part of the story is told in the form of records of the contributions of noted men Because titles, dates and places of publication are cited for both periodical articles and books in which important advances were revealed, the work has considerable utility as reference book.

MINORSKY NICHOLAS

Introduction to non linear mechanics topological methods analytical methods non linear resonance relaxation oscillations Ann Arbor J W Edwards 1947 447 p. illus. $6 00 201

Contents. Part I, Topological methods of non-linear mechanics. Phase trajectories of linear systems. Phase trajectories of non-linear conservative systems. Questions of stability Limit cycles of Poincaré. Bifurcation theory (Poincaré) Geometrical analysis of existence of periodic solutions. Cylindrical phase space. Part II, Analytical methods of non-linear mechanics Introductory remarks. Method of Poincaré. Method of Van der Pol. Theory of the first approximation of Kryloff and Bogoliuboff. Approximations of higher order. Method of equivalent linearization of Kryloff and Bogoliuboff. References. Part III, Non-linear resonance Introductory remarks. Systems with several degrees of freedom. Subharmonics and frequency demultiplication. External periodic excitation of quasi-linear systems. Non-linear external resonance. Subharmonic resonance on the basis of the theory of Poincaré. Entrainment of frequency Parametric excitation. References. Part IV Relaxation oscillations: Introductory remarks. Fundamentals of the discontinuous theory of relaxation oscillations. Degenerate systems with one degree of freedom. Multiply degenerate systems. Mechanical relaxation oscillations. Oscillations maintained by periodic impulses. Effect of parasitic parameters on stationary states of dynamical systems. References. Index.

Note Linear differential equations are much used in computations in engineering, especially in problems concerning oscillation and resonance. However linear methods fail to give accurate results in many cases, because the assumptions or idealizations that must be made are not valid. This work is an introduction to certain useful mathematical methods that may be used for more accurate results in such cases. It was issued originally as restricted reports for the use of authorized personnel during World War II, and has been republished in this form by permission of the Office of Technical Services of the Department of Commerce.

ROUSE HUNTER

Elementary mechanics of fluids New York John Wiley & Sons, Inc., 1946 376 p. illus 22 cm. $4.25 202

Contents Introduction to the study of fluid motion. Fluid velocity and acceleration. Pressure variation in accelerated flow Effects of gravity on fluid motion. One-dimensional method of flow analysis Effects of viscosity on fluid motion. Surface resistance. Form resistance. Lift and propulsion. Surface tension. The role of compressibility in fluid motion. Appendix Mechanical properties of fluid matter Index.

Note Just as the mechanics of solids, originally taught as part of courses in classical physics, became f sufficient importance to warrant fuller treatment in separate courses in statics and dynamics, the mechanics of fluids is today becoming subject of courses distinct from courses in physics and even in hydraulics. This work on the fundamental principles and phenomena of the flow of liquids and gases has been written for use in such courses. It is intended primarily for engineering students who have had courses in physics and calculus. It is also useful as compact and up-to-date guide for graduate engineers. The author is Director of the Iowa Institute of Hydraulic Research.

SLATER, JOHN CLARKE AND NATHANIEL H FRANK

Mechanics New York McGraw Hill Book Company Inc., 1947 297 p. illus 23 cm. (International series in pure and applied physics, G P Harnwell, consulting editor) $4 00 203

Contents The linear motion of particle. The linear oscillator Motion in two and three dimensions. Lagrange's and Hamilton's equations. The motion of rigid bodies. The motion of symmetrical rigid body Coupled systems and normal coordinates. The vibrating string Wave propagation in the string. The string with variable tension and density The vibrating membrane. Stresses, strains, and vibrations of an elastic solid. Flow of fluids. Appendices Suggested references Index

Note (404) The present volume is one of several which will eventually replace the authors' *Introduction to theoretical physics*, New York: McGraw-Hill, 1933. The change in format has been made to provide fuller and more rounded treatment of the several branches of physics. As in the original volume, emphasis is placed on the theoretical aspects of the subject, and the book

intended for use in classroom courses in college physics. The general arrangement and form of presentation are similar to the chapters on mechanics in the 1943 work, but topics such as linear motion and motion of rigid bodies are discussed in greater detail. In the appendix the mathematical background necessary for an understanding of the subjects discussed is summarized and reviewed.

STREETER, VICTOR LYLE

Fluid dynamics. New York McGraw Hill Book Company Inc. 1948 263 p illus. 23 cm. (McGraw Hill publications in aeronautical science, Jerome C. Hunsaker consulting editor) $5 00 204

Contents: Fluid flow concepts. Fundamentals of frictionless fluid flow. Theorems and basic flow definitions. Three-dimensional flow examples. Application of complex variables to two-dimensional fluid flow. Two-dimensional flow examples. Blasius theorem—flow around cylinders and airfoils. Schwarz-Christoffel theorem—free streamlines. Vortex motion. Equations for viscous flow. Examples of viscous flow. The boundary layer. Index.

Note: An introduction to the general theory of fluid flow intended primarily for use in graduate courses in fluid mechanics. The treatment centers largely on the development and solution of equations which express the behavior of fluids under varying conditions. It is assumed the reader has a working knowledge of elementary and differential calculus. More advanced mathematical concepts, such as the theories of complex variable and conformal mapping, are explained in the text as the need arises. The illustrative matter includes many original graphic representations of fluid nets and patterns.

VENNARD JOHN KING

Elementary fluid mechanics. Second edition. New York John Wiley & Sons, Inc., 1947 339 p. illus. 22 cm $4.00 205

Contents: Fundamentals. Fluid statics. The flow of an incompressible ideal fluid. Flow of a compressible ideal fluid. The impulse-momentum principle. The flow of a real fluid. Similarity and dimensional analysis. Fluid flow in pipes. Fluid flow in open channels. Fluid measurements. Flow about immersed objects. Appendices. Index.

Note. (413) An engineering college textbook. It is designed as a first book in the subject for students who have completed courses in mathematics through calculus and in the mechanics of solids. In order to convey a broad introduction the author has stressed physical concepts rather than rigorous mathematical derivations. Changes in the second edition include the expansion of the former chapter on ideal-fluid flow into the present three chapters on the incompressible fluid, the compressible fluid, and the impulse-momentum principle, a longer treatment of practical pipe-line problems, and an increased number of problems for students.

ATOMIC AND NUCLEAR PHYSICS

BETHE HANS ALBRECHT

Elementary nuclear theory a short course on selected topics New York John Wiley & Sons Inc., 1947 147 p illus. 22 cm. $2.50 206

Contents: Descriptive theory of nuclei. Basic facts about nuclei. The size of nuclei. Beta disintegration (descriptive). Further facts about nuclear disintegrations. Spin and statistics. Beta disintegration and the neutrino. Quantitative theory of nuclear forces. Physical properties of proton, neutron and deuteron. Ground state of the deuteron. Scattering of neutrons by free protons. Scattering of neutrons by protons bound in molecules. Interaction of the deuteron with radiation. Scattering of protons by protons. Non-central forces. Saturation of nuclear forces. Sketch of the meson theory of nuclear forces. Topics not related to nuclear forces. Beta disintegration. The compound nucleus. Appendix: Table of nuclear species. Index.

Note: In spite of the word "elementary" in the title, this work is addressed to graduate physicists and other persons who have equivalent education in mathematics and physics. The book represents notes taken down from lectures delivered by Dr. Bethe at the Research Laboratory of the General Electric Company at Schenectady. The main theme is the quantitative consideration of nuclear forces, but other topics of current interest are also considered.

CORK, JAMES MURLE

Radioactivity and nuclear physics. New York D Van Nostrand Company Inc., 1947 313 p illus. 22 cm. $4.00 207

Contents: Natural radioactivity. The detection of radiation. Induced radioactivity-apparatus. Alpha rays. Beta rays. Gamma radiation. Neutrons. Protons, deuterons, and some other particles. Cosmic radiation. Nuclear fission. Some applications of radioactivity. Table of isotopes. References. Appendix. Author index. Subject index.

Note: A concise survey of the history and present state of knowledge of the atomic nucleus and radioactivity. It is intended for college students but the treatment is not too difficult for lay readers who were able to understand the Smyth report. Under each heading, the historical background is sketched briefly, then the current knowledge is summarized together with formulas and data that are within the grasp of readers who have a knowledge of elementary physics. Including citations in footnotes, there are about 600 references to the pertinent literature.

DARROW, KARL KELCHNER

Atomic energy being The Norman Wait Harris lectures delivered at Northwestern University New York John Wiley & Sons Inc. 1948 80 p. illus. 22 cm. $2 00 208

Note: Dr Darrow's purpose in the four lectures reproduced in this volume was to give his listeners a general view of what is now known about atomic structure and the mechanism of nuclear fission. As is usual in this author's writings, the exposition is lucid and is marked by many apt analogies. Despite the abundance of previously published literature on this subject, this book should be read and added to library collections. It will appeal especially to the more intelligent type of reader who is annoyed by over-simplified presentations.

EIDINOFF, MAXWELL LEIGH AND HYMAN RUCHLIS

Atomics for the millions. Illustrated by Maurice Sendak. With an introduction by Harold C. Urey New York McGraw Hill Book Company Inc., 1947 281 p. illus. 23 cm. $3 75 209

Contents: Part I, Exploration. Enter—the atomic age. The tiny atom comes into its own. Other roads lead to the atom. Atomic secrets from empty tubes. Light illuminates the atom. Part II, Architecture: Radium introduces atomic energy. Discovering atomic architecture. Atom guns. Modern alchemy. Finding the neutron. Atoms and the universe. Man made radioactivity. Part III, Practical atomic energy. Splitting uranium atoms. First atomic-energy machine. Plutonium—large-scale alchemy. Heavy water. U235. Using electromagnets. The atomic bomb. Alamogordo through Bikini. Part IV Your atomic age. Energy and power. Harnessing the atom. Seven-league boots. Tagging the atom. Medicine in the atomic age. Atomic war—world suicide? Index of names. Subject index.

Note: Since the announcement of the atomic bomb, many books designed to explain atomic fission and atomic energy to general readers have appeared in all countries. This book is one of the best published in the United States of America. It is a well-integrated account that rightfully shows the bomb to be only an application of fundamental knowledge gradually won by the scientists of many countries. The text reads easily and the statements made are accurate.

GAMOW GEORGE

Atomic energy in cosmic and human life fifty years of radioactivity New York Cambridge University Press 1946 161 p. illus 21 cm. $1 75 210

Note: The purpose of this short book is to explain radioactivity and atomic energy to the general reader. The atom bomb occupies only a few pages, while the greater part of the book is devoted to a clearly written exposition of the properties and structure of atoms, atomic energy in the stars, and to a discussion of whether or not atomic energy will be used for peaceful purposes. The author has not hesitated to use graphs and mathematics where necessary but both these and the rest of the writing are presented in a readily understandable manner.

correction table for local use Corrections for difference between inlet-water and room temperatures. Correction of heating value to basis of measurement for use Records and computations.

Note: This publication, which supplements National Bureau of Standards Circular 48, *Standard methods of gas testing* contains condensed directions for operating gas calorimeter of the water-flow ("Junkers") type with forms and directions for recording and computing results; tables of "reduction factors for gas volumes between 32 and 110° F and from 24 to 30 9 in. of mercury pressure; and tables of correction factors needed in fuel gas calorimetry Blank forms are included to be filled in with data pertaining to local situations and individual laboratory instruments, so that the user may have all the data needed in gas calorimetry conveniently arranged under one cover

WELD LEROY DOUGHERTY

A textbook of heat for upperclassmen New York The Macmillan Company 1948 436 p. illus. 22 cm. $5.00 230

Contents The nature and the measurement of heat. Expansion of solids and liquids. Fusion, evaporation, and sublimation of pure substances. Observable behavior of gases. Molecular motion in pure gases. Thermodynamic processes and cycles. Entropy Fluid mixtures and suspensions. Thermal conduction and some thermal properties of metals. Thermal radiation Very high and very low temperatures. Appendices. Indexes.

Note: A clear style combined with relative brevity is the outstanding characteristic of this college textbook. Also, instead of devoting chapter to thermometry the various methods of temperature measurement are discussed throughout the work in connection with the physical phenomena associated with temperature changes. Lists of selected references accompany most of the chapters.

WORTHING ARCHIE GARFIELD AND DAVID HALLIDAY

Heat. New York John Wiley & Sons Inc., 1948 522 p illus. 23 cm. $6 00 231

Contents: Some laboratory procedures. Temperature and its measurement. The expansivities of solids and liquids. The dynamical theory of heat. Calorimetry Specific heats of solids and liquids. Thermal conduction of solids and liquids. Thermal properties of gases. Elementary thermodynamics. Change of phase Heat engines, refrigerators, and human power plants. Convection. Radiant energy Appendix: Derivation of Maxwell's equation for the velocity distribution of the molecules of an ideal gas composed of identical molecules. Tables, physical properties Tables, mathematical. Properties of determinants. Answers to problems. Author index. Subject index.

Note: This work is primarily textbook. The full book is intended for courses offered to advanced students, but it is adaptable to courses offered to second-year students by the omission of certain passages set in fine print. Two features should give it considerable utility outside of organized courses. One is the inclusion of brief biographical data about persons who have made important advances in thermodynamic theory or apparatus. The other is the emphasis on experimental techniques. For example, the book contains descriptions of apparatus set-ups and experimental procedures for the determination of vapor pressures, heats of vaporization, etc. Many unexpected applications of thermodynamics are discussed, such as the efficiencies of incandescent electric lamps, the human body as power plant, and the weather

LIGHT AND OPTICS

AMERICAN PHYSICAL SOCIETY DIVISION OF ELECTRON OPTICS

Preparation and characteristics of solid luminescent materials. Symposium held at Cornell University October 24–26 1946 sponsored by The Division of Electron Optics of The American Physical Society Published under the auspices of The National Research Council. New York John Wiley & Sons Inc. 1948 459 p illus 22 cm. $5 00 232

Contents Foreword, by Lloyd P Smith. General characteristics and methods of preparation Luminescent crystals, by F Seitz. The preparation of sulfide and selenide phosphors, by R. Ward. The preparation of phosphors containing oxygen and fluorine by H. C. Froelich. The constitution and structure of phosphors, by G. R. Fonda. Recent developments in theory and experiment Some studies of electron traps in phosphors, by G F J. Garlick. Storage and release of light by phosphors, by F Urbach. Infrared-sensitive phosphors, by B O'Brien. Excitation and emission phenomena in phosphors, by H. W Leverenz. Factors affecting fluorescence characteristics The fluorescence of cadmium sulfide by J K. Inman, A. M. Mraz and W A. Weyl. Photoluminescence of some sulfide phosphors as function of intensity by N. R. Nail, D Pearlman and F Urbach. Zinc-cadmium-sulfide selenide phosphors, Part Synthesis and constitution, by H. W Leverenz, R. J. Wood, S. Larach, and R. E. Shrader Part Photoluminescence and cathodoluminescence as function of temperature crystal structure, diffuse reflectivity and photolysis, by S. Larach R. E. Shrader and H. W Leverenz Part III Spectral emission characteristics and relative intensities, by R. E. Shrader S. Larach, and H. W Leverenz. Effect of temperature on the spectral energy distribution of several phosphors, by F J Studer and L. Owen. The influence of temperature upon the intensity of luminescence of various phosphors, by L. Thorington Storage of luminescence energy Absorption, storage, and release of light by infrared sensitive phosphors, by F Urbach, H. Hemmendinger and D. Pearlman. Induction and decay of luminescence as function of excitation by W B Nottingham. Measurement of brightness decay of phosphorescent materials, by R. P Teele. The decay of infrared sensitive phosphors, by R. T Ellickson and W L. Parker The mechanism of rate processes in the luminescence of solids, by F E. Williams. Stimulation of some zinc sulfide phosphors, by D. Pearlman N R. Nail, and F Urbach. Miscellaneous aspects of fluorescence The photochemical effect of short ultraviolet radiation on phosphors, by G. Meister and R. Nagy The reactivation of sulfide phosphors below formation temperature by D. T Wilber Multiple bands in the fluorescence spectra of singly activated phosphors, by G. R. Fonda and H. C. Froelich. Correlation of the structure of various phosphors, by R. Nagy The luminescence of zinc beryllium silicate and of other manganese-activated phosphors, by J H. Schulman. The fluorescent efficiency of calcium tungstate under X-ray excitation by J W Coltman. Some observations on light absorption of powdered luminescent materials, by F H. Nicoll. The print-out effect and its use in the study of the motions of electrons in silver-halide crystals in an electric field, by J. R. Haynes. Luminescence—Experiment and others. Significance of paramagnetism, by S. Dushman, F Seitz. Luminescence and purity of materials, by H. W Leverenz and others. Significance of paramagnetism, by S. Dushman, F Seitz, and F Urbach. Scope and limitations of energy diagrams, by W B. Nottingham, F Seitz, and G. F J. Garlick. Characteristics and possible mechanisms of luminescence, by P Pringsheim and others.

Note The papers collected here provide comprehensive survey of current knowledge of the subject. They are intended mainly for graduate physicists and other research workers with equivalent training There are some citations to pertinent literature, but no prepared bibliography and unfortunately no index.

BROWN EARLE B

Optical instruments with a foreword by James G Baker Illustrated by the author Brooklyn, N Y Chemical Publishing Co., Inc. 1945 567 p. illus. 22 cm. $10.00 233

Contents (abridged) Part I, Principles of geometrical optics Nature of light—sources—media—elementary definitions Reflection. Refraction. Critical angle. Refraction through prism. Thin lenses. Thick lenses—combinations of thin lenses—optical systems. Total reflecting prisms. Aperture and field of an optical system. Aberrations of lenses. Erecting systems. Eyepieces. Reticles. Part II, Description operation and theory of optical instruments The telescope. Cameras. The microscope. Field glasses and binoculars. Projectors. The spectroscope. Theodolites Military instruments. Range finders. Part III, Construction and maintenance of optical instruments: The fabrication of optical elements. Care and cleaning of optical elements. Mechanical maintenance and adjustment. Part IV Supplementary topics: Notes on the design of optical systems The manufacture of optical glass. Notes on physical optics Appendices: Mathematical proofs. Glossary of optical instrument terms Index.

Note A general survey of optical instruments principally for users of such instruments and for repairmen. The author covers the basic principles of theory design, function, and adjustment for all of the more common types of optical instruments; however the book is not intended to supplant the instruction and maintenance manuals of the various manufacturers. Considerable emphasis has been placed on details of the telescope since most optical instruments are essentially telescopic in nature. A knowledge of algebra and trigonometry is needed to understand some parts of the text.

various groups under contract with United States Government units in the years 1941–1946. The treatment is largely theoretical, with considerable attention given to the basic hydrodynamical principles and phenomena. However the equipment and methods used in carrying out the experiments are also described. Data that are still restricted for reasons of military security are of course not included. The work is intended for persons engaged in similar work, graduate physicists, and engineers.

CURRIER, ALBERT ELDRED

Analytic mechanics prepared for the Department of Mathematics of the United States Naval Academy Annapolis The United States Naval Institute, 1948 306 p illus. 24 cm. $4 75 198

Contents Introduction. Components, sums, moments and equilibrium of forces in the plane. Physical significance of a system of forces in equilibrium, and applications to statics problems. Trusses. Equivalent forces, equivalent systems of forces and resultants. Resultant of gravity forces, center of gravity center of mass, centroids. Moment of inertia. Normal force and force of friction Strength of materials, and beams. Plane dynamics of a particle. Work, energy and potential functions. Motion of a system of particles. Impulse and momentum, impulsive forces Index.

Note. This text has been designed specifically to fit in with the program of studies offered midshipmen at the United States Naval Academy, and to meet the requirements of that institution. The scope and level of difficulty is that of the average introductory college text in mechanics, and requires a knowledge of mathematics through elementary calculus. Each chapter includes numerous exercises and problems which illustrate the practical applications of the preceding theoretical discussions.

DEN HARTOG, JACOB PIETER

Mechanics. New York McGraw Hill Book Company Inc. 1948 462 p illus. 23 cm. $4 50 199

Contents Discrete coplanar forces. Conditions of equilibrium. Distributed forces. Trusses and cables. Beams Friction. Space forces. The method of work. Kinematics of a point. Dynamics of a particle. Kinematics of plane motion. Moments of inertia Dynamics of plane motion. Work and energy Impulse and momentum. Relative motion. Gyroscopes. Problems. Answers to problems. List of equations. Index.

Note Although this new textbook is meant to be used in what the professors call "rigorous courses, it is well organized, reasonably short, and the weight of the exposition is lessened every now and then by touches of humor Skeptical readers can sample the latter quality by reading the discussion of the pipe wrench and the automobile brake on pages 93–94. The work is designed for use in courses offered to sophomore or junior engineering college students. It will be of some use in libraries as a fuller and more advanced treatment of mechanics than is found in physics textbooks.

GIRVIN HARVEY FRANK

A historical appraisal of mechanics Scranton, Pa. International Textbook Company 1948 275 p illus. 23 cm. $4 75 200

Contents Foreword, by A. A. Potter Part I, The creation of science and scientific thinking: Introduction. Early Greek philosophy Medieval period, 300–1400 Part II, Scientific thought begins to function The Renaissance, 1400–1600. The beginning of the modern period. Dynamics, the science of motion Period between Galileo and Newton Isaac Newton, 1642–1727 Work of Newton's contemporaries and followers. In retrospect. Part III, Mechanics of materials. Pre-elastic development. Theory of elasticity Post Saint Venant period. Mechanics and engineering education in the United States. The nineteen-forties. Appendices. Index.

Note An easy-to-read account of the gradual development of man's knowledge of physical mechanics It is intended to provide students and interested laymen with a critical survey and considerable part of the story is told in the form of résumés of the contributions of noted men. Because titles, dates and places of publication are cited for both periodical articles and books in which important advances were revealed, the work has considerable utility as a reference book.

MINORSKY NICHOLAS

Introduction to non linear mechanics topological methods analytical methods non-linear resonance, relaxation oscillations. Ann Arbor J W Edwards, 1947 447 p. illus. $6 00 201

Content Part I, Topological methods of non-linear mechanics: Phase trajectories of linear systems. Phase trajectories of non-linear conservative systems. Questions of stability Limit cycles of Poincaré. Bifurcation theory (Poincaré) Geometrical analysis of existence of periodic solutions. Cylindrical phase space. Part II, Analytical methods of non-linear mechanics Introductory remarks. Method of Poincaré. Method of Van der Pol. Theory of the first approximation of Kryloff and Bogoliuboff. Approximations of higher order. Method of equivalent linearization of Kryloff and Bogoliuboff. References. Part III, Non-linear resonance Introductory remarks. Systems with several degrees of freedom. Subharmonics and frequency demultiplication. External periodic excitation of quasi-linear systems. Non-linear external resonance Subharmonic resonance on the basis of the theory of Poincaré. Entrainment of frequency Parametric excitation. References. Part IV Relaxation oscillations Introductory remarks. Fundamentals of the discontinuous theory of relaxation oscillations Degenerate systems with one degree of freedom. Multiply degenerate systems. Mechanical relaxation oscillations. Oscillations maintained by periodic impulses. Effect of parasitic parameters on stationary states of dynamical systems. References. Index.

Note: Linear differential equations are much used in computations in engineering, especially in problems concerning oscillation and resonance. However linear methods fail to give accurate results in many cases, because the assumptions or idealizations that must be made are not valid. This work is an introduction to certain useful mathematical methods that may be used for more accurate results in such cases. It was issued originally as restricted reports for the use of authorized personnel during World War II, and has been republished in this form by permission of the Office of Technical Services of the Department of Commerce.

ROUSE HUNTER

Elementary mechanics of fluids New York John Wiley & Sons Inc., 1946 376 p. illus 22 cm. $4.25 202

Contents Introduction to the study of fluid motion. Fluid velocity and acceleration. Pressure variation in accelerated flow. Effects of gravity on fluid motion. One-dimensional method of flow analysis Effects of viscosity on fluid motion. Surface resistance. Form resistance, Lift and propulsion. Surface tension. The role of compressibility in fluid motion. Appendix. Mechanical properties of fluid matter Index.

Note Just as the mechanics of solids, originally taught as part of courses in classical physics, became of sufficient importance to warrant fuller treatment in separate courses in statics and dynamics, the mechanics of fluids is today becoming a subject of courses distinct from courses in physics and even in hydraulics. This work on the fundamental principles and phenomena of the flow of liquids and gases has been written for use in such courses. It is intended primarily for engineering students who have had courses in physics and calculus. It is also useful as a compact and up-to-date guide for graduate engineers. The author is Director of the Iowa Institute of Hydraulic Research.

SLATER, JOHN CLARKE, AND NATHANIEL H. FRANK

Mechanics New York McGraw Hill Book Company Inc. 1947 297 p illus. 23 cm. (International series in pure and applied physics, G P Harnwell, consulting editor) $4.00 203

Contents The linear motion of a particle. The linear oscillator Motion in two and three dimensions. Lagrange's and Hamilton's equations. The motion of rigid bodies. The motion of a symmetrical rigid body Coupled systems and normal coordinates. The vibrating string. Wave propagation in the string. The string with variable tension and density The vibrating membrane. Stresses, strains, and vibrations of an elastic solid. Flow of fluids. Appendices. Suggested references. Index.

Note (604) The present volume is one of several which will eventually replace the authors' *Introduction to theoretical physics.* New York McGraw-Hill, 1933. The change in format has been made to provide a fuller and more rounded treatment of the several branches of physics. As in the original volume, emphasis is placed on the theoretical aspects of the subject, and the book is

PAULI, WOLFGANG

Meson theory of nuclear forces. Second edition New York Interscience Publishers Inc., 1948 69 p. illus. 21 cm. $2 00 218

Contents. Various types of meson fields. Scalar charged meson field. Pseudoscalar symmetric theory. Vector-field theory. Theory of extended source. Scattering of mesons. Magnetic moment in the strong coupling case. Magnetic moment in the weak coupling case. Quantum theory of scattering. Theory of radiation damping. Heisenberg's "observable quantities." Proof that *S* is unitary. Theory of neutron-proton scattering. Strong coupling theory of the two-nucleon system. Concluding remarks. Appendix.

Note: The lectures that make up this volume were delivered in substantially their present form at Massachusetts Institute of Technology in 1944. In them the author critically examines various problems and hypotheses that bear on the meson theory of nuclear forces. The discussion is largely in mathematical terms and is intended for persons with an advanced knowledge of physics. The second edition is the same as the first (1946) except for the revision of about three pages that deal with recent work on neutron-proton scattering and the strong coupling theory

ROBERTSON JOHN KELLOCK

Atomic artillery and the atomic bomb Second edition New York D Van Nostrand Company Inc., 1945 173 p illus. 20 cm. $2.50 219

Contents Granular matter Propelling electrified particles. Electrons, the lightest projectiles. Heavier projectiles—positive rays. Nature's projectiles. Mass without matter Cosmic rays. Bringing up the big guns. Modern alchemy Photon bombardment and new test. The formation of radio-elements. The structure of the nucleus. Nuclear fission and chain reactions. The bomb. Index.

Note: (343) A non-mathematical survey of atomic physics for the general reader. Its chief merits are clear style and concise treatment free of sensational journalism. The work first appeared in 1937 under the title *Atomic artillery*. In the present edition the original text has been revised and has been augmented by the chapters on nuclear fission and the bomb.

SEMAT, HENRY

Introduction to atomic physics. Revised and enlarged New York Rinehart & Co., Inc., 1946 412 p. illus. 24 cm. $4.50 220

Contents (abridged) Part I, Foundations of atomic physics: Elements of electricity and magnetism. Elementary charged particles. Electromagnetic radiation. Waves and particles. Part II, The extranuclear structure of the atom. Part III, The nucleus Natural radioactivity Disintegration of nuclei, Nuclear energy Appendices Values of some physical constants. Table of atomic weights. Table of isotopic masses, Table of stable isotopes. Displacement equations for Brownian motion. Path of an alpha particle in a Coulomb field of force. Derivation of the equations for the Compton effect. Index.

Note. The revision of this text for undergraduate college students follows closely the plan of the first edition in organization and presentation of subject. Some chapter bibliographies and lists of problems have been enlarged and new sections such as the description of the betatron have been added. However the principal changes are to be found in the discussion of the nucleus, which is now treated in three chapters instead of the original one. The text has been entirely re-set and new illustrative material added.

SHANNON, JAMES IGNATIUS

The amazing electron. Milwaukee, Wis. The Bruce Publishing Company 1946 248 p illus. 22 cm. (Science and culture series, Joseph Husslein, general editor) $4.00 221

Contents: Introduction. The electron and its discovery *Distribution* of positive and negative electricity within the atom. Evaluation of the charge on the electron. Positive rays—the mass spectrograph—isotopes. Electrons boiled out of metals—thermions and thermionics. Electrons ejected by light—photoelectrons, photoelectric cells. X-rays. Structure of the atom—the Bohr theory—origin of spectral lines. Radioactivity—alpha rays. Superspeedy electrons: beta rays—gamma rays. The neutron—the positron. Structure of the nucleus—artificial disintegration of the atom—induced radioactivity. The nucleus—resistant to change yet occasionally changing—splitting. Cosmic rays. The dual nature of the electron—waves and particles. Summary. Appendices. Books for reference. Glossary. Index.

Note Although intended as a popular account, this well written book actually demands some prior knowledge of basic physics. The subject is treated from the standpoint of physical principles rather than applications. The author is head of the Department of Physics of St. Louis University

SOUND

GEOLOGICAL SOCIETY OF AMERICA

Propagation of sound in the ocean Explosion sounds in shallow water by J Lamar Worzel and Maurice Ewing Theory of propagation of explosive sound in shallow water by C. L. Pekeris Long-range sound transmission by Maurice Ewing and J Lamar Worzel. Contribution no 415 from the Woods Hole Oceanographic Institution. New York The Geological Society of America, 1948 53 117, 35 p illus. 25 cm. (The Geological Society of America. Memoir 27) $2 75 222

Contents: Explosion sounds in shallow water: Recording system characteristics. Calibrations. Calibration reductions. Shot list. Water waves. Bubble pulses. Ground waves. Refraction results. Conclusions. References cited. Index.—Theory of propagation of explosive sound in shallow water: Part I, Data. Some observed characteristics of pressure records obtained at large ranges from an explosion in shallow water. Qualitative discussion of the theory of propagation of explosive sound in shallow water. Summary of the solution of the wave equation for the problem of propagation of sound produced by a point-source explosion in shallow water. Propagation of a pressure pulse in shallow water. Features of the pressure wave from an explosion in shallow water. Some remarks on the history of the development of the theory of normal modes in elastic half-spaces and of its applications to problems of propagation of shocks. Preliminary report on free acoustic waves, prepared in November 1941. Part II, Theory: Theory of propagation of sound in water underlain by a uniform bottom of different density and sound velocity. Theory of propagation of sound in a three-layered liquid half-space. References cited. Index.—Long-range sound transmission: Hydrographic data. Ray diagram calculation. Travel times. Calibration and frequency response. Peak intensities. Sound energies. Conclusions. Appendices: Calculation of travel time along a sound ray. Shot list. References cited. Index.

Note These papers are based on a series of experiments that were carried out under contracts between the Woods Hole Oceanographic Institution and several agencies of the United States Government.

POTTER, RALPH KIMBALL AND OTHERS

Visible speech, by Ralph K. Potter George A. Kopp, and Harriet C. Green. New York D Van Nostrand Company Inc., 1947 441 p. illus. (part col'd) 27 cm. (The Bell Telephone Laboratories series) $4 75 223

Contents: Foreword, by Dr. Oliver E. Buckley. Part I, Development and basic principles of visible speech: Introduction. The sound spectrograph. The direct translator. The training program. The basic principles of visible speech—the new ABC's. Part II, Lesson units—visible patterns of American speech. Suggestions for using the lesson chapters. The patterns and the hubs of the vowels and diphthongs. Reading the stop sounds. Reading the fricative sounds. Reading the vowel-like sounds—the nasal sounds—the glides. Reading the words. Part III, Applications of visible speech. Deaf interests. Phonetic interests. Speech correction interests. Foreign language interests. Vocal music interests. Generalities and speculations. Appendix I—Reference listing of phonetic symbols. Appendix II—Summary of the pattern and hub areas. Bibliography of technical publications on visible speech. Index.

Note: It has been long possible to make such visual records of the sounds of speech as appear on the sound tracks of moving picture films, but the patterns of such recordings are much too complex to be readable. However if the complex wave of a spoken sound or word is analyzed by a variable filter into its chief components, and these are recorded individually distinctive patterns are produced which can be read by persons with proper training. This book contains brief non-technical descriptions of the electronic

sound spectrograph and the direct translator which convert the spoken sounds to visible patterns; but chiefly it surveys the principles and potential applications of visible speech. It will be of more interest to teachers of speech and persons concerned with the education of the deaf than to engineers. The authors are all present or former staff members of the Bell Telephone Laboratories.

SUPERSONICS

COURANT RICHARD, AND K. O FRIEDRICHS
Supersonic flow and shock waves. New York Interscience Publishers Inc. 1948 464 p illus. 24 cm. (Pure and applied mathematics series. Vol. 1. H Bohr R. Courant and J J Stoker editors) $7.00 224

Contents Compressible fluids: General equations of flow Thermodynamic notions. Differential equations for specific types of flow Appendix—wave motion in shallow water Mathematical theory of hyperbolic flow equations for functions of two variables: Appendix. One-dimensional flow: Continuous flow Rarefaction and compression waves—Appendix. Shocks Interactions. Detonation and deflagration waves. Appendix—wave propagation in elastic-plastic material. Isentropic irrotational steady plane flow Hodograph method. Characteristics and simple waves. Oblique shock fronts Interactions—shock reflection. Approximate treatments of interactions. Airfoil flow Remarks about boundary value problems for steady flow Flow in nozzles and jets Flow in three dimensions: Steady flow with cylindrical symmetry Conical flow Spherical waves. Bibliography Index of symbols. Subject index.

Note. The authors, professors of mathematics at the Institute for Mathematics and Physics at New York University, have based this volume on report which they prepared for the Office of Scientific Research and Development in 1944. Intended as an advanced text for mathematicians, engineers and physicists, it presents in mathematical form the principles and theories regarding the behavior of fluids and gases when subjected to extremely high pressures. Particularly important is the detailed development of the theory of nonlinear wave motion. The extensive bibliography is limited to non-restricted war-time reports and other readily available material.

EMMONS HOWARD W
Gas dynamics tables for air New York Dover Publications Inc., 1947 46 p illus. 24 cm. Paper $1 75 225

Contents Tables Isentropic gas dynamics functions for air Gas dynamics functions for normal shocks Characteristic table Acoustic velocity-temperature table. Graphical presentation of tabulated functions Pressure ratio vs. Mach number Velocity ratio vs. Mach number Dynamic pressure vs. Mach number Area ratio vs Mach number Density ratio vs. Mach number Mass velocity (or mass flux, flow per unit area) vs. Mach number Temperature ratio vs. Mach number Acoustic velocity ratio vs. Mach number Ratio of stagnation pressure downstream of normal shock to the stagnation pressure upstream of the shock vs. Mach number before the shock. Ratio of stagnation pressure downstream of normal shock to the static pressure upstream of the shock vs. Mach number upstream of the shock (this is the so-called Rayleigh pitot tube formula). Mach number downstream of normal shock vs. Mach number upstream of normal shock. Ratio of velocities downstream and upstream of normal shock vs Mach number upstream of shock. Pressure ratio for normal shock vs Mach number upstream of normal shock Acoustic velocity ratio for normal shock vs. Mach number upstream of the normal shock. Temperature ratio for normal shock vs. Mach number upstream of the normal shock. Density ratio for normal shock vs Mach number upstream of the normal shock. Mach angle vs Mach number Property angle vs. Mach number Variation of acoustic velocity with the temperature of air

Note A reference pamphlet of tables and graphs The work is intended for aeronautical engineers who are engaged in the design of high-speed aircraft, and is based in part on research sponsored by Pratt and Whitney at Harvard University

KEENAN JOSEPH HENRY AND JOSEPH KAYE
Gas tables thermodynamic properties of air products of combustion and component gases compressible flow functions including those of Ascher H. Shapiro and Gilbert M Edelman New York John Wiley & Sons, Inc. 1948 238 p illus. 26 cm. $5 00 226

Contents (abridged) Tables. Sources and methods. Examples. Bibliography

Note This collection of 64 tables is intended primarily for engineers concerned with making calculations of gas-turbine processes. It supersedes an earlier work entitled *Thermodynamic properties of air* New York Wiley 1945. The tabulated properties of air found in the 1945 volume, have been expanded to cover air at lower temperatures; and base temperature, for which enthalpy is zero on the absolute Fahrenheit scale, has now been used in making the calculations. The volume has been further enlarged to include the properties of products of combustion of hydrocarbons and tables of functions used in analyzing the flow of compressible fluids.

THERMODYNAMICS AND HEAT

ADAMS ARTHUR STANTON, AND GEORGE DEWEY HILDING
Fundamentals of thermodynamics. New York Harper & Brothers 1945 289 p. illus. 24 cm $3 75 227

Contents Introductory principles and definitions. Heat and work. Availability of heat energy. Thermodynamic properties of gases—gaseous change of state. Thermodynamic properties of vapors—vapor change of state. Compressed air Internal combustion engines—the Otto and Diesel cycles. Steam cycles—steam engines and turbines. List of symbols. Steam tables. Index.

Note. An introductory text in which thermodynamics is treated as basic statement of energy relations applicable to many fields of science and engineering. It is briefer than some texts designed for beginning students, nevertheless it provides an adequate, fairly rigorous treatment of fundamental principles A knowledge of calculus on the part of the student has been assumed.

INGERSOLL LEONARD ROSE AND OTHERS
Heat conduction with engineering and geological applications, by Leonard R. Ingersoll Otto J Zobel and Alfred C. Ingersoll. New York McGraw Hill Book Company Inc. 1948 278 p illus 23 cm. (International series in pure and applied physics G P Harnwell consulting editor) $4 00 228

Contents Introduction. The Fourier conduction equation. Steady state—one dimension. Steady state—more than one dimension. Periodic flow of heat in one dimension Fourier series. Linear flow of heat Flow of heat in more than one dimension. Formation of ice. Auxiliary methods of treating heat-conduction problems. Methods of measuring thermal-conductivity constants. Appendices. Index.

Note Mathematical methods that are applicable to complex problems, such as the working out of geological time tables, heat flow in the vulcanization of tires, the cooling of gas turbines, and heat sources for heat pumps, are treated in this textbook. Although relatively advanced, the book is aimed at men who will make practical use of the knowledge; hence the emphasis is on practical rather than refined methods of attack. It has been assumed that the reader will have knowledge of fundamental physics and calculus. The work is based on Ingersoll and Zobel' earlier book, *A introduction to the mathematical theory of heat conduction* (Boston, 1913) but in this edition the material has been extensively revised and augmented. The bibliography includes more than 100 references, some to literature published as recently as 1948.

JESSUP RALPH SLOCOMB AND ELMER R. WEAVER
Gas calorimeter tables. Third edition. Washington D C. Government Printing Office 1948 42 p illus. 23 cm. (United States. National Bureau of Standards. Circular 464 [supersedes Circular 417]) Paper $0 15 229

Contents Introduction. Summarized operating directions for water-flow gas calorimeters. Tables and charts. Corrections for humidity specific heat of water buoyancy and heat loss. Preparation of

correction table for local use. Corrections for difference between inlet-water and room temperatures. Correction of heating value to basis of measurement for use. Records and computations.

Note This publication which supplements National Bureau of Standards Circular 48, *Standard methods of gas testing* contains condensed directions for operating a gas calorimeter of the water-flow ("Junkers") type, with forms and directions for recording and computing results; tables of "reduction factor" for gas volumes between 32° and 110° F and from 24 to 30.9 in. of mercury pressure; and tables of correction factors needed in fuel gas calorimetry. Blank forms are included to be filled in with data pertaining to local situations and individual laboratory instruments, so that the user may have all the data needed in gas calorimetry conveniently arranged under one cover

WELD LEROY DOUGHERTY

A textbook of heat for upperclassmen New York The Macmillan Company 1948 436 p illus 22 cm. $5.00 230

Contents The nature and the measurement of heat. Expansion of solids and liquids. Fusion, evaporation and sublimation of pure substances. Observable behavior of gases. Molecular motion in pure gases. Thermodynamic processes and cycles. Entropy. Fluid mixtures and suspensions. Thermal conduction and some thermal properties of metals. Thermal radiation. Very high and very low temperatures. Appendixes. Indexes.

Note A clear style combined with relative brevity is the outstanding characteristic of this college textbook. Also, instead of devoting a chapter to thermometry the various methods of temperature measurement are discussed throughout the work in connection with the physical phenomena associated with temperature changes. Lists of selected references accompany most of the chapters.

WORTHING ARCHIE GARFIELD AND DAVID HALLIDAY

Heat. New York John Wiley & Sons, Inc., 1948. 522 p illus. 23 cm. $6 00 231

Contents Some laboratory procedures. Temperature and its measurement. The expansivities of solids and liquids. The dynamical theory of heat. Calorimetry. Specific heats of solids and liquids. Thermal conduction of solids and liquids. Thermal properties of gases. Elementary thermodynamics. Change of phase. Heat engines, refrigerators, and human power plants. Convection. Radiant energy. Appendix Derivation of Maxwell's equation for the velocity distribution of the molecules of an ideal gas composed of identical molecules. Tables, physical properties. Tables, mathematical. Properties of determinants. Answers to problems. Author index. Subject index.

Note This work is primarily a textbook. The full book is intended for courses offered to advanced students, but it is adaptable to courses offered to second-year students by the omission of certain passages set in fine print. Two features should give it considerable utility outside of organized courses. One is the inclusion of brief biographical data about persons who have made important advances in thermodynamic theory or apparatus. The other is the emphasis on experimental techniques. For example the book contains descriptions of apparatus set-ups and experimental procedures for the determination of vapor pressures, heats of vaporization etc. Many unexpected applications of thermodynamics are discussed, such as the efficiencies of incandescent electric lamps, the human body as power plant, and the weather

LIGHT AND OPTICS

AMERICAN PHYSICAL SOCIETY DIVISION OF ELECTRON OPTICS

Preparation and characteristics of solid luminescent materials. Symposium held at Cornell University October 24–26 1946 sponsored by The Division of Electron Optics of The American Physical Society Published under the auspices of The National Research Council. New York John Wiley & Sons Inc. 1948 459 p illus. 22 cm. $5.00 232

Contents Foreword, by Lloyd P. Smith. General characteristics and methods of preparation. Luminescent crystals, by F Seitz. The preparation of sulfide and selenide phosphors, by R. Ward. The preparation of phosphors containing oxygen and fluorine by H. C. Froelich. The constitution and structure of phosphors, by G. R. Fonda. Recent developments in theory and experiment: Some studies of electron traps in phosphors, by G. F J. Garlick. Storage and release of light by phosphors, by F Urbach. Infrared-sensitive phosphors, by B. O'Brien. Excitation and emission phenomena in phosphors, by H. W Leverenz. Factors affecting fluorescence characteristics. The fluorescence of cadmium sulfide, by J K. Inman, A. M. Mraz, and W A. Weyl. Photoluminescence of some sulfide phosphors as a function of intensity by N. R. Nail, D. Pearlman and F Urbach. Zinc cadmium-sulfide selenide phosphors, Part I Synthesis and constitution, by H. W Leverenz, E. J Wood, S. Lasof and R. E. Shrader. Part II Photoluminescence and cathodoluminescence as a function of temperature; crystal structure diffuse reflectivity; and photolysis, by S. Lasof, R. E. Shrader and H. W Leverenz. Part III Spectral emission characteristics and relative intensities, by R. E. Shrader S. Lasof, and H. W Leverenz. Effect of temperature on the spectral energy distribution of several phosphors, by F J Studer and L. Gunn. The influence of temperature upon the intensity of luminescence of various phosphors, by L. Thorington. Storage of luminescence energy. Absorption, storage and release of light by infrared sensitive phosphors, by F Urbach, H. Hemmendinger and D Pearlman. Induction and decay of luminescence as a function of excitation, by W B. Nottingham. Measurement of brightness decay of phosphorescent materials, by R. P Teele. The decay of infrared-sensitive phosphors, by R. T Ellickson and W L. Parker. The mechanism of rate processes in the luminescence of solids, by F E. Williams. Stimulation of some zinc sulfide phosphors, by D. Pearlman N. R. Nail, and F Urbach. Miscellaneous aspects of fluorescence. The photochemical effect of short ultraviolet radiation on phosphors, by G. McItar and R. Nagy. The reactivation of sulfide phosphors below formation temperature, by D. T Wilber. Multiple bands in the fluorescence spectra of singly activated phosphors, by G. R. Fonda and H. C. Froelich. Correlation of the structure of various phosphors, by R. Nagy. The luminescence of zinc beryllium silicate and of other manganese-activated phosphors, by J H. Schulman. The fluorescent efficiency of calcium tungstate under X-ray excitation, by J W Coltman. Some observations on light absorption of powdered luminescent materials, by F H. Nicoll. The print-out effect and its use in the study of the motions of electrons in silver-halide crystals in an electric field, by J R. Haynes. Luminescence—Experiment and others. Significance of paramagnetism, by S. Dushman, F Seitz, Luminescence and purity of materials, by H. W. Leverenz and others. Significance of paramagnetism, by S. Dushman F Seitz, and F Urbach. Scope and limitations of energy diagrams, by W B. Nottingham, F Seitz, and G. F J. Garlick. Characteristics and possible mechanisms of luminescence, by F Pringsheim and others.

Note. The papers collected here provide a comprehensive survey of current knowledge of the subject. They are intended mainly for graduate physicists and other research workers with equivalent training. There are some citations to pertinent literature, but no prepared bibliography and unfortunately no index.

BROWN EARLE B

Optical instruments with a foreword by James G Baker Illustrated by the author Brooklyn N Y Chemical Publishing Co Inc 1945 567 p illus. 22 cm. $10.00 233

Contents (abridged) Part I, Principles of geometrical optics: Nature of light—sources—media—elementary definitions. Reflection. Refraction. Critical angle. Refraction through a prism. Thin lenses. Thick lenses—combinations of thin lenses—optical systems. Total reflecting prisms. Aperture and field of an optical system. Aberrations of lenses. Erecting systems. Eyepieces. Reticles. Part II, Description operation and theory of optical instruments: The telescope. Cameras. The microscope. Field glasses and binoculars. Projectors. The spectroscope. Theodolites. Military instruments. Range finders. Part III, Construction and maintenance of optical instruments: The fabrication of optical elements. Care and cleaning of optical elements. Mechanical maintenance and adjustment. Part IV Supplementary topics: Notes on the design of optical systems. The manufacture of optical glass. Notes on physical optics. Appendices: Mathematical proof. Glossary of optical instrument terms. Index.

Note. A general survey of optical instruments principally for users of such instruments and for repairmen. The author covers the basic principles of theory design, function, and adjustment for all of the more common types of optical instruments; however the book is not intended to supplant the instruction and maintenance manuals of the various manufacturers. Considerable emphasis has been placed on details of the telescope since most optical instruments are essentially telescopic in nature. A knowledge of algebra and trigonometry is needed to understand some parts of the text.

DE MENT JACK

Fluorochemistry a comprehensive study embracing the theory and applications of luminescence and radiation in physicochemical science. Brooklyn N Y Chemical Publishing Company Inc. *1945 796 p illus. 22 cm.* $14.50 234

Contents Part I, Fluorochemistry in theory: Physical aspect of luminescence. Physicochemical aspects of luminescence. Part II, "Homogeneous" luminescent systems The luminescent organic substances. The luminescent dyestuffs and coloring matters. Part III, "Heterogeneous" luminescent systems: The phosphor modality—quasichemical systems. The synthetic, crystalline inorganic phosphors. The synthetic vitreous phosphors—glasses. The organic phosphors and luminescent plastics. The natural phosphors—luminescent minerals. Part IV Ultraluminescence and infraluminescence Ultraviolet emitting substances. The ultraviolet emitting inorganic substances. The ultraviolet emitting organic and metal-organic substances. Fluorescent gamma and X-radiation. Fluorescent infrared radiation. Part Fluorochemistry and fluorobiology: Aspects of fluorobiology Appendices. Author index. Subject index.

Note: A full treatment of the physics and chemistry of fluorescence and fluorescent substances based on comprehensive survey of the literature and on the author's own researches. It is somewhat marred by errors and an uncritical selection of material, hence it must be used with caution. Important contributions are made to the theoretical aspects, and large amount of information is included on practical applications, including applications in biology and medicine. Bibliographies and glossaries are included. Patents are listed in several of the bibliographies.

EVANS RALPH MERRILL

An introduction to color New York John Wiley & Sons Inc., 1948 340 p illus. (part col d) 25 cm. $6 00 235

Contents. Color and light. The physical nature of light. Light sources Illumination. Colored objects. The physics of everyday color Color vision. The visual variables of color Perception and illusion. Brightness perception. Color perception. The measurement of color The specification of color Color differences and color names. Mixtures of colored lights Effects of illuminants. Transparent colorant mixtures. Paints and pigments. Color in photography Color in art. Design and abstraction. General bibliography Index.

Note This book is designed to provide scientific background for understanding color and making practical use of it. However specific practical applications are cited only incidentally and the mystical and pseudo-scientific notions that appear in some books on color are altogether absent Instead, the author has discussed and synthesized pertinent topics from physics, physiology and psychology He is associated with the Eastman Kodak Company and perhaps has given shade of emphasis to aspects that are of special interest in color photography The illustrative matter includes many graphs There are chapter bibliographies and also general bibliography

HERZBERGER MAX

The limitations of optical image formation. New York The New York Academy of Sciences 1946 30 p illus 24 cm. (New York Academy of Sciences Annals. Vol. 48 p. 1–30 1946) Paper $0 75 236

Contents Introduction. Part Point and diapoint Part II. Second-order derivatives of *D* and *N* Part III Special systems Spatial symmetrical system. Part IV Spatial-symmetrical systems. The diapoint characteristic for single refracting surface. Further applications of the theory *References.*

Note This paper describes new method of investigating the limitations of image formation which will assist lens designers in determining the image-forming qualities of an optical system By the introduction of the concept of diapoint characteristic, demonstrated on few classical examples, it is possible to find out at once whether the system in question images point sharply symmetrically or half-symmetrically The method also points the way to new treatment of image errors. The elegant analysis will be of interest to mathematicians as well as designers of optical instruments.

UNITED STATES NATIONAL BUREAU OF STANDARDS

Tables of scattering functions for spherical particles. Washington D C. Government Printing Office, 1949 119 p 27 cm (United States. National Bureau of Standards. Applied mathematics series 4) Paper 237

Contents (abridged): Mathematical definitions of tabulated functions. Physical significance of the tabulated quantities. Computation of $K(m, -mh)$ for small values of *k*. Bibliographic notes. Part Values of $1/2\alpha^2 K(m)$; [3S]. Values of the functions A_1 in $R(A_n)$ $I(A_n)$; $R(P)$ and $I(P_n)$ for $\gamma = 0°(10°)180°$; [4S or 6D]. Values of $R(h^n)$; $I(h^n)$; $R(h^n)$; and $I(h^n)$ for $= 0°(10°)180°$; [4S or 4D]. Part II Values of $K(m)$; [4S] [illegible] [4D]. Part III Values of $K(m)$ $L(m)$; Approximation polynomials for $K(m)$; $L(m)$; $K(1.5, -1.5k)$ and $K(m, -mk)$; [4S or 5D]. Part IV Values of [illegible] [5D]; [illegible] [4D]. The figures in brackets denote the number of decimal places or significant figures in the tabulated entries. The letters D and S stand for decimal places and significant figures respectively

Note: These tables were computed from equations presented by Gustav Mie in his paper Beiträge zur Optik trüber Medien (Annalen der Physik, ser 4, 25, 1908, p. 377–445), in which he deals with the problem of diffraction of plane wave by sphere of any composition. The data will be of value to physicists, chemists, and biologists concerned with the phenomenon of light scattering.

SPECTROSCOPY

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on spectroscopic light sources. Forty-ninth annual meeting American Society for Testing Materials, Buffalo, N Y June 24–28 1946 Philadelphia American Society for Testing Materials 1948 79 p. illus 23 cm. (Special technical publication no 76) Paper $2.00 238

Contents Introduction, by E. B. Ashcraft. The present status of excitation in spectrographic analysis, by B. F Scribner. A study of the controlled spectrographic spark source, by J. H. Enns and R. A. Wolfe. Some properties of gas discharges used as spectral sources, by R. C. Mason Short-period phenomena in light sources, by G. H. Dieke. Prepared discussion R. H. Bell, W R. Koch, C. J Kochera, E. K. Jaycox, J R. Churchill, L. W Strock, M. F Hasler P R. Irish and J L. Saunderson. General discussion.

Note A survey of current theory and practice in several methods of excitation of atoms in spectrochemical analysis. The text is supplemented by reproductions of circuit diagrams, oscillograms, graphs, and photographs of apparatus.

HARRISON, GEORGE RUSSELL, AND OTHERS

Practical spectroscopy by George R. Harrison, Richard C Lord and John R. Loofbourow New York Prentice-Hall Inc., 1948. 605 p illus 22 cm. (Prentice-Hall physics series, Donald H. Menzel editor) $6 65 *239*

Contents Spectroscopy as scientific tool. Selection of spectroscopic instruments. Prism spectroscopes and spectrographs Diffraction-grating spectrographs. The testing, adjustment, and care of spectroscopic equipment Illumination of the spectroscope. Photography of the spectrum. Light sources for spectroscopy Identification of spectrum lines. The origins of atomic spectra. Molecular spectra and molecular structure The measurement of spectral intensities. Photographic photometry Absorption spectrophotometry Qualitative spectrographic analysis of materials. Quantitative spectrochemical analysis. Spectroscopy of the infrared region. Raman spectroscopy Spectroscopy of the vacuum ultraviolet. Interferometric spectroscopy Appendices. Index.

Note A survey of spectroscopic techniques and apparatus for chemists, physicists, and other scientific research workers. It is addressed to chemists, physicists and other research workers who are not specialists in spectroscopy but who use, or are interested

in using spectroscopy as an analytical or research technique. The physical principles which are the bases of the various types of spectroscopy are explained in considerable detail, and the wide range of spectroscopic apparatus is discussed from the viewpoint of principles, characteristics, and uses. These discussions are addressed to scientists and contain a good deal of laboratory "know-how" much of which is not to be found elsewhere. Related literature is cited both in footnotes and in selected reference lists at the ends of chapters. The authors are all associated with the Spectroscopy Laboratory of Massachusetts Institute of Technology

HERZBERG, GERHARD
Infrared and Raman spectra of polyatomic molecules forming the second volume of Molecular spectra and molecular structure. New York D Van Nostrand Company Inc., 1945 632 p. illus. 23 cm. $9.50 240

Contents Rotation and rotation spectra. Vibrations, vibrational energy levels, and vibrational eigenfunctions. Vibrational infrared and Raman spectra. Interaction of rotation and vibration, rotation-vibration spectra. Applications. Appendix: Physical constants and conversion factors. Bibliography Author index. Subject index.

Note. The second in series of three volumes dealing with the measurement and interpretation of energy levels in molecules. As in the author's *Molecular spectra and molecular structure* I, *Diatomic molecules*, New York Prentice-Hall, Inc., 1939 the present investigation is restricted mainly to the spectra of gases and vapors. The treatment presupposes limited knowledge of wave mechanics, but the mathematical developments have been reduced to minimum. Certain discussions for advanced readers are printed in smaller type and may be omitted by the beginner who wants to familiarize himself only with the more important principles. For reference convenience much of the more important data has been assembled in tabular form. The volume is intended for advanced students of chemistry and physics, and for scientific research workers.

MOORE, CHARLOTTE EMMA
The spectra of hydrogen, deuterium helium, lithium, beryllium, boron, carbon nitrogen, oxygen, and fluorine. Washington, D C. Government Printing Office 1948 75 p. illus. 29 cm. (United States. Bureau of Standards. Circular 467 Atomic energy levels as derived from the analyses of optical spectra. Vol. I section 1) Paper $0.50 241

Contents Foreword. Hydrogen. Deuterium. Helium. Lithium. Beryllium. Boron. Carbon. Nitrogen. Oxygen. Fluorine.

Note (473) Presented in this publication are data in tabular form concerning 45 atomic spectra of the ten elements named in the title, with bibliographical references to the sources of the data. The pamphlet is the first of series being prepared at the National Bureau of Standards as part of program on the critical compilation of all energy levels derived from observations of atomic spectra (exclusive of hyperfine structure ascribed to atomic nuclei). The collected results will finally appear in bound volumes of approximately 300 pages each composed of the sections being separately published in advance. The completed work will describe about 400 spectra and will supersede *Atomic energy states as derived from the analyses of optical spectra*, compiled by R. F Bacher and S. Goudsmit, New York, 1932.

VENABLE WILLIAM MAYO
The interpretation of spectra. New York Reinhold Publishing Corporation, 1948 200 p. illus 23 cm. $6.00 242

Contents Introduction. Classification of the lines of the spectrum of hydrogen. The spectrum of deuterium. The spectrum of helium. Long first order series. The interpretation of spectral orders. X-ray spectral lines. A preliminary model of hydrogen atom. The possibility of producing spectral line. The first Lyman line of hydrogen. The primary lines of hydrogen. An improved model of the hydrogen atom. The origins of the many lined spectrum. Excitation of emission spectra. Nuclear structure. Tables of data. Index.

Note For many years the author of this book has been investigating spectra, particularly the relationships between primary and secondary lines, and examining critically the accepted theories about atomic structure and the origins of spectral lines. In his opinion the accepted theories fall short of explaining many spectral phenomena that can be readily observed. Accordingly he has evolved theory of atomic structure which he published first in 1933 in his *The sub-atom: an interpretation of spectra in conformity with the principles of mechanics*. In the present work many additional data are presented and interpretations of them on the basis of this theory are offered. The book will be of interest chiefly to physicists concerned with atomic structure.

X-RAYS AND OTHER RADIATION

LANGE ISABELLE AND S E FORBUSH
Cosmic-ray results from Huancayo Observatory, Peru, June 1936–December, 1946 including summaries from observatories at Cheltenham Christchurch, and Godhavn through 1946 Washington D C. Carnegie Institution of Washington 1948 182 p. illus. 28 cm. (Carnegie Institution of Washington. Publication 175 Department of Terrestrial Magnetism. Researches of the Department of Terrestrial Magnetism. Vol. XIV) Paper $1.00 cloth $1.50 243

Contents Introduction. Cosmic-ray meter installation. Description of cosmic-ray meter. Absolute ionization. Reduction of data. Description of tables. Literature cited. Figures 1 17 Tables. Bibliography of published papers of analyses of data from Compton-Bennett cosmic-ray meters.

Note The major portion of this publication consists of 207 tables presenting daily records of the results of cosmic-ray measurements made between 1936 and 1946 with precision meters installed at magnetic observatories in Peru, Maryland, New Zealand, and Greenland. The tables are arranged one or two to page. The preliminary text contains descriptions of the methods of collecting the data as well as descriptions of the contents of the tables.

LUCKIESH MATTHEW
Applications of germicidal erythemal and infrared energy New York D Van Nostrand Company Inc., 1946 463 p illus 21 cm. $5.50 244

Contents Challenging the sun. Sunlight and skylight. Erythema and tan. Units and terminology for biological effectiveness. Germicidal energy Disinfecting controlled air. Infected communal air Disinfecting air in occupied interiors. Disinfecting water Artificial sunlight. Fading of materials. Ultraviolet energy and plant life. Radiant energy in common illuminants. Reflection and transmission. Measurement of ultraviolet energy Various applications of radiant energy References. Index.

Note This work by the director of the Lighting Research Laboratory of the General Electric Company is concerned chiefly with the germicidal, biological, and therapeutic properties of ultraviolet energy but only as regards the physics and mechanics of the subject. Thus there are chapters which describe the construction and properties of various types of arc lamps, and discussions of the amount of energy required to produce erythema and tan but the biological and medical explanations of this reaction are referred to only in passing The work is largely presentation of scientific data, but it is written so that it can be understood by the lay reader A ten-page bibliography is included.

SPROULL WAYNE TREBER
X-rays in practice. New York McGraw Hill Book Company Inc. 1946 615 p. illus. 23 cm. $6 00 245

Contents (abridged) History of X-rays. Fundamentals of X-ray tubes. Characteristic X-ray spectra. Absorption and scattering. Refraction of X-rays and their diffraction by ruled gratings. X-ray generating equipment. X-ray detection, measurement, and registration. Protection. X-rays in the medical field (radiology) Industrial radiography Laws of X-ray diffraction in crystal. The Bragg method of crystal analysis and some pertinent properties of actual crystals. The Laue method, the rotation method, and other methods for single crystal. The Hull-Debye-Scherrer powder method. Chemical analysis by X-ray diffraction. The measurement of stress and strain by X-ray diffraction. X-ray diffraction by amorphous

solids, liquids, and gases. Electron diffraction and its applications. Appendix Index.

Note A rather thorough exposition of X-ray principles and research techniques. It is organized as a textbook with the usual questions and problems, but it is written on a level that will attract engineers and scientists who though not X-ray specialists need a scientific understanding of the subject. Mathematics is freely used in the exposition. Related literature is cited in footnotes, thus enhancing the book's reference value. The author is a physicist with the research laboratories of General Motors Corporation.

ELECTRICITY

CULVER CHARLES AARON

Theory and applications of electricity and magnetism. New York McGraw Hill Book Company Inc., 1947 594 p illus 23 cm $5 00 246

Contents Introductory The electric field. Magnetostatics. Terrestrial magnetism. Potential. Measurement of potential. Capacitance. Current, electromotive force, and resistance. Fundamental D-c measurements. Thermal effects of the electric current. Applications of the thermal effect. Chemical effects of the electric current. Primary and secondary cells. Thermoelectric phenomena. Magnetic effects of electric current. Electromagnetic induction. Generators. Motors. The transformer. Alternating currents. The symbolic method and its application to A-c problems. Alternating-current instruments. Electrical units. Electronic emission. Control of electrons. Electrical conduction in gases. Roentgen or X-rays. Radioactivity and atomic structure. Thermionic tubes and their uses. Electromagnetic waves and some applications. Index.

Note An intermediate textbook for students who have had courses in basic physics and in calculus. Its purpose is to prepare the student for further work in physics or electrical engineering. Along with its expositions of fundamental principles, the book contains good descriptions of scientific instruments and industrial machines in which they are applied. The work supersedes the author' *Electricity and magnetism* published in 1930.

LOEB LEONARD BENEDICT

Fundamentals of electricity & magnetism. Third edition. New York John Wiley & Sons Inc., 1947 669 p illus. 24 cm. $6 00 247

Contents (abridged) Historical. The quantitative treatment of magnetic forces. The absolute determination of pole strength and magnetic fields. Electric currents Potential difference and work in an electric circuit. Generalization of Ohm's law Liquid conductors—electrolysis—batteries. Thermoelectricity Static electricity—charges and fields—potential—capacity Electromagnetics. Magnetic properties of materials. Induced electric currents. Simple dynamos and motors. Induction Electrical and magnetic measurements Alternating currents. The ratio of electromagnetic and electrostatic units, Maxwell' equations and electromagnetic waves, and the character of electrical units and their dimensions. Discharge through gases and atomic structure. Photoelectric and thermionic effects. Problems. Name index Subject index.

Note. A college textbook that is designed to give engineering and science students an unusually thorough grounding in the electrical part of basic physics. I intended for use in long courses and the material is more advanced and requires more knowledge of mathematics than is usual in undergraduate textbooks Subject matter and its arrangement in the present edition are the same as in the previous edition (1933) but there are 113 additional pages hich include revisions and new material dealing with uclear constitution, the betatron, synchrotron magnetotron, klystron, UFH wave generation, and the principles of ferromagnetism

SKILLING HUGH HILDRETH

Exploring electricity man s unfinished quest. New York The Ronald Press Company 1948 277 p illus. 22 cm (Humanizing science series, Jaques Cattell editor) $3.50 248

Contents The ragged edge of history Physicians to the queen. Mr Benjamin Franklin The tragic story of Dr Galvani and the triumph of Count Alessandro Volta. Volta was wrong. Danish scientist relates electricity and magnetism Professor Ampère Men who measured electricity Michael and Joseph. Experimental researches. And mathematical researches. Electric waves. Electricity comes out into the open. "That versatile talking bottle. Is everything electricity? Atoms explode. Among those present. Index.

Note A popular account for general reading of the growth of man's understanding and control of electricity The author develops his subject through series of chapter biographies, each of which is devoted to one or more historically important scientists who have contributed to the fundamental knowledge of electricity The book begins with Thales of Miletus, 600 B. C., and ends with Oppenheimer of Los Alamos, 1945 A. D An alphabetically arranged summary is provided which briefly covers the life of each scientist mentioned in the text.

SLATER, JOHN CLARKE AND NATHANIEL H FRANK

Electromagnetism. New York McGraw Hill Book Company Inc., 1947 240 p illus. 23 cm. (International series in pure and applied physics G P Harnwell, consulting editor) $3 50 249

Contents The field theory of electromagnetism. Electrostatics. Solutions of Laplace's equation. Dielectrics. Magnetic fields of currents. Magnetic materials. Electromagnetic induction and Maxwell' equations. Electromagnetic waves and energy flow Electron theory and dispersion. Reflection and refraction of electromagnetic waves. Wave guides and cavity resonators. Spherical electromagnetic waves. Huygens' principle and Green's theorem. Fresnel and Fraunhofer diffraction Appendices Index

Note Electromagnetism is one of several textbooks that will eventually replace the author's *Introduction to theoretical physics*, New York, McGraw-Hill, 1933. The separate titles are still intended for use in rigorous courses in college physics, the change in format being made principally so that more extensive, more useful treatments of each subject could be provided The general arrangement and method of presentation here are similar to the chapters on electromagnetism of the earlier work, but several topics, such as the solution of Laplace' equation, dielectrics, electron theory and dispersion, are discussed in more detail. New matter on magnetic materials and cavity resonators has been added. Vector calculus and number of other forms of higher mathematics are encountered throughout the text.

MAGNETISM

SANFORD RAYMOND LARAWAY

Magnetic testing Sixth edition Washington, D C Government Printing Office, 1946. 40 p illus. 23 cm. (United States National Bureau of Standards Circular C456 [supersedes Circular C415]) Paper $0 10 250

Contents. Magnetic quantities, units, symbols, and equations Introduction. Magnetic quantities and units. Magnetic characteristics of materials. Tests with direct currents. Tests with alternating currents. Magnetic properties of typical materials. Magnetic analysis. Tables and references

Note A pamphlet presenting general information on the scientific background and practical applications of magnetic testing as carried on at the National Bureau of Standards, here work in this field includes investigation and development of testing methods, testing of magnetic materials, and investigations in the field of magnetic analyses The 1946 edition includes descriptions of new methods and apparatus developed in the decade since the publication of the preceding edition. The last two pages contain bibliography of 34 items on magnetic testing.

TERRESTRIAL ELECTRICITY AND MAGNETISM

CARNEGIE INSTITUTION OF WASHINGTON DEPARTMENT OF TERRESTRIAL MAGNETISM

Description of the earth s main magnetic field and its secular change 1905–1945 By E. H Vestine, L. Laporte, I Lange C Cooper and W C Hendrix. Washington D C. Carnegie Institution of Washington 1948

532 p. illus 28 cm. (Carnegie Institution of Washington Publication 578) Paper $2.75 cloth, $3.00 251

Contents Introduction. Preliminary description of the earth's surface magnetic field. Preparation of tables for reduction to epoch. Method of reduction of magnetic observations. Graphs of reduced observatory and survey-station values. Isoporic charts, 1912.5 1922.5, 1932.5 and 1942.5 all elements. Main-field charts, epoch 1945. Literature cited.

Note In tables, graphs, maps, and text this volume presents data summarizing a world-wide descriptive study of the earth's main magnetic field and its secular change for the period 1905–1945. Many published observations of magnetic surveys on land and ocean are here fitted into a consistent picture. A feature of the volume is the set of world-charts descriptive of secular change drawn complete in all magnetic elements for four different epochs, each a decade apart, affording information respecting the deep-seated, rapid, and mysterious physical processes of the earth's interior not known to be reflected in any other way

CARNEGIE INSTITUTION OF WASHINGTON DEPARTMENT OF TERRESTRIAL MAGNETISM

The geomagnetic field its description and analysis by E. H Vestine I. Lange Lucile Laporte, and W E Scott. Washington D C. Carnegie Institution of Washington, 1947 390 p illus. 28 cm. (Carnegie Institution of Washington Publication 580) Paper $1.85 cloth, $2.40 252

Contents: Introduction. The earth's main field and its analysis. Geomagnetic secular change and its analysis. The geomagnetic variation with sunspot-cycle, *KV* The geomagnetic annual variation, *AV* The geomagnetic post-perturbation, *P* The solar daily variation on quiet days, S_q. The disturbance daily variation, S_D and storm-time variation, D_{st}. Frequencies of geomagnetic fluctuation of various intensities and durations. Magnetic storms and associated phenomena. Prediction of geomagnetic fluctuations. Literature cited.

Note: A companion volume to E. H. Vestine and others, *Description of the earth's main magnetic field and its secular change 1905–1945* described above. The present monograph is composed of magnetic-field maps of parts of the earth, charts, graphs, and tabulated data, plus interspersed analyses and interpretations of this information. The chief purpose of the volume is to extend the scope of the earlier largely descriptive work to the various known geomagnetic variations as listed above. The two volumes together are believed to comprise the first convenient detailed compendium of geomagnetic world data suited especially to the needs of scientists and engineers who are concerned with practical applications of geomagnetism.

CARNEGIE INSTITUTION OF WASHINGTON DEPARTMENT OF TERRESTRIAL MAGNETISM

Ionospheric research at Huancayo Observatory, Peru January, 1938–June, 1946 by H. W Wells and L. V Berkner Washington D C. Carnegie Institution of Washington 1947 449 p illus 28 cm. (Carnegie Institution of Washington Publication 175 Researches of the Department of Terrestrial Magnetism. Vol. XI) $2.50 paper $2.00 253

Contents (both volumes) Introduction. Description of observatory and ionospheric program. Basic principles of ionospheric research. Automatic multifrequency equipment for ionospheric measurements. Ionospheric records and analyses Survey of results. Literature cited. Figures. Tables. Bibliography

Ionospheric research at Watheroo Observatory Western Australia, June, 1938–June, 1946 by L. V Berkner and H. W Wells. Washington D C. Carnegie Institution of Washington 1948 425 p illus. 28 cm. (Carnegie Institution of Washington. Publication 175 Researches of the Department of Terrestrial Magnetism. Vol. XIII) $2.50 paper $2.00 253a

Note These volumes consist chiefly of tabulated data obtained at two observatories geographically remote from each other The investigations are carried on and the results are here published in order to facilitate further study of the ionosphere and related phenomena.

CARNEGIE INSTITUTION OF WASHINGTON DEPARTMENT OF TERRESTRIAL MAGNETISM

Magnetic results from Huancayo Observatory, Peru 1922–1935 [and] 1936–1944 by H. F Johnston, A. G McNish S E. Forbush W E. Scott Ella Balsam and P G Ledig Washington D C. Carnegie Institution of Washington 1948 2 v illus. 28 cm. (Carnegie Institution of Washington. Publication 175 Researches of the Department of Terrestrial Magnetism. Vol x-A x B) Vol. x A Paper $3.25 cloth $3.75 Vol. x B Paper $2.00 cloth $2.50 254

Contents (abridged) Volume x-A The observatory buildings. General program of investigations—Meteorology—Atmospheric electricity—Terrestrial electricity Magnetic absolute instruments and methods of use. Variation instruments and methods of use. Basic hourly values and associated means. Principal magnetic storms and sudden commencements. Literature cited. Illustrations. Tables. Volume x-B Description of instruments. Constants of the magnetographs. Absolute observations and variometer base-line values. Summary of monthly means. Summary of annual means. Tables.

Note The greater part of these volumes consists of a series of tables in which are given the hourly mean values of the magnetic elements, arranged by months for the years indicated. The values of horizontal intensity vertical intensity and declination are tabulated separately The data presented were gathered as part of a carefully planned long range program of investigations of terrestrial magnetism by the Carnegie Institution.

CARNEGIE INSTITUTION OF WASHINGTON DEPARTMENT OF TERRESTRIAL MAGNETISM

Magnetic results from Watheroo Observatory Western Australia, 1919–1935 [and] 1936–1944 by J A. Fleming H. F Johnston A. G McNish, S E. Forbush and W E. Scott. Washington, D C. Carnegie Institution of Washington 1947 2 v illus. 28 cm. (Carnegie Institution of Washington Publication 175 Researches of the Department of Terrestrial Magnetism. Vol. VII A, VII B) Paper Vol. VII A $5.75 Vol. VII B $2.80 255

Note These volumes are similar in content and purpose to *Magnetic results from Huancayo Observatory* described above.

SEATON STUART LUMAN, AND OTHERS

I. Ionospheric research at College, Alaska, July 1941–June, 1946 by S L. Seaton, H. W Wells and L. V Berkner II. Auroral research at College, Alaska, 1941–1944 by S. L. Seaton and C. W Malich. Washington D C. Carnegie Institution of Washington 1947 397 p. illus. 28 cm. (Carnegie Institution of Washington. Publication 175 Researches of the Department of Terrestrial Magnetism. Vol. XII.) $2.35 paper $1.85 256

Contents. Ionospheric research at College, Alaska, July 1941 June, 1946 Introduction. Description of site and buildings. Description of instruments and instrumental procedures. Discussion of results. Special reports. Literature cited. Figures 1–22 Tables 4–118 Hourly values of ionospheric measurements, 1941–1946. II. Auroral research at College, Alaska, 1941–1944 Introduction. Buildings and personnel. Description of instruments and instrumental procedures. Discussion of data. Figures 1–2. Table 2: Values of zenith auroral intensity measurements.

Note The two parts of this volume describe in detail and give the results (in tables which comprise 150 pages) of two related programs of research financed by the Carnegie Institution of Washington, the National Defense Research Committee, and the Navy Department, and carried on with the cooperation of the University of Alaska. The volume includes supplementary reports on Polar radio disturbance during magnetic bays, Vertical distribution of electrons from ionospheric measurements at College, Alaska, and Measurements of height f maximum electron density at College, Alaska, June 1941 to June, 1944.

WALLIS WILLIAM FISHER, AND J W GREEN

Land and ocean magnetic observations 1927–1944 Washington D C Carnegie Institution of Washington, 1947 243 p illus. 28 cm (Carnegie Institution of Washington Publication 175 Researches of the Department of Terrestrial Magnetism. Vol. VIII.) $1 75 paper $1.25 257

Contents: Summary of land work: Secular-variation stations. Descriptions of instruments: Magnetometers. Sine galvanometer Dip circles and earth inductors. Reductions to standard instruments: Magnetic standards adopted. Magnetometer corrections Inclinometer corrections. Methods of observation. Observers' field reports. Land magnetic observations Explanatory remarks. Distribution of stations. Results of land magnetic observations, 1927–1944 Descriptions of stations. Ocean magnetic observations, Cruise VII of the *Carnegie*, 1928–1929

Note. This volume continues the record of land magnetic observations *given in vol. I, II, IV VI, and VII (1912–1947) of the* same series; vol. III and (1917–1926) give the results of magnetic observation at sea on the *Galilee* and *Carnegie*. Vol. VIII contains two extensive tables of magnetic results, one for land and one for the oceans, for the years 1927–1944. Methods, notations, instruments, and general particulars pertinent to the results are briefly summarized, but for further details the reader is directed to earlier volumes in the series, particularly to vol. VI for land work and to vol. for ocean work.

METEOROLOGY

BERRY, FREDERIC AROYCE AND OTHERS, editors

Handbook of meteorology, edited by F A Berry Jr E. Bollay [and] Norman R. Beers. New York McGraw Hill Book Company Inc. 1945 1,068 p illus 23 cm. $7.50 258

Contents: Numerical and graphical data. Meteorological mathematics and calculations. Physics of atmospheric phenomena. Radiation. Meteorological thermodynamics and atmospheric statics. Kinematics and dynamics of fluid flow The scientific basis of modern meteorology Meteorological instruments. Transmission and plotting of meteorological data. Synoptic meteorology and weather forecasting. Clouds and states of the sky Climatology Hydrometeorology Oceanography Index.

Note: A reference book of fundamental theory and practical data useful to students of meteorology and to professional meteorologists and weather forecasters. Meteorology is viewed as an applied science as well as branch of physics, and the kinds of material included are similar to the kinds included in the standard handbooks of other branches of engineering. Each section is the work of one or more experts, and adequate well selected bibliographies accompany most of the sections.

BLAIR, THOMAS ARTHUR

Weather elements a text in elementary meteorology Third edition New York Prentice-Hall Inc. 1948 373 p illus 23 cm. $5 65 259

Contents: The atmosphere. Observing temperature, pressure, and wind. Observing moisture sunshine, visibility and upper air conditions. Solar radiation and its effects. Condensation of water in the atmosphere. Interrelations of temperature, pressure, and wind. The general circulation. The secondary circulation. Air masses and fronts. Lesser disturbances. Weather analysis and forecasting. Aviation and the weather Climate. World weather relations and climatic influences. Electrical and optical phenomena. The United States Weather Bureau. Appendixes Bibliography Conversion factors and tables. Mean monthly and annual temperature and precipitation (tables) Index.

Note: (713) A clearly written introduction that is used both as textbook in college courses and as self-instruction book. Although the exposition avoids the use of advanced physical and mathematical concepts, the reader is given rather comprehensive and scientifically accurate view of meteorological phenomena. The chapters on air masses and fronts and on aviation and the weather were added in this edition; and there are other changes over the second edition (1942) including information on the use of radar and other techniques in observing and forecasting that were developed during World War II.

CLAYTON HENRY HELM AND FRANCES L. CLAYTON compilers

World weather records, 1931–1940 (continued from volumes 79 and 90) Prepared in cooperation with the various official weather services and observatories of the world. Assembled and arranged for publication by H. Helm Clayton and Frances L. Clayton Published under grant from John A. Roebling (Publication 3803) Washington, D C. Smithsonian Institution 1947 646 p 23 cm. (Smithsonian miscellaneous collections. Vol. 105 whole volume) Paper $3.50 260

Contents. Editorial note Abbreviations and symbols. Part I, Pressure temperature and precipitation at selected stations, 1931–1940 Meteo. Data. Part II, Sea-level pressure at 10° intersections over Northern Hemisphere. Part III, Additional data. Appendices: Lake and river levels. Sunspot numbers. Alphabetical index of stations and countries. Geographical index by 10° zones of latitude.

Note (771) A compilation of scientific weather data for the period 1931 1940 collected from all parts of the earth. The data are arranged under the following grand divisions of the earth: Africa, Asia, Australia, Europe, Indian Ocean North America, North Atlantic, North Pacific, South America, South Atlantic, South Pacific. Within each of these divisions appear subdivisions of countries or islands, and with the countries the stations are alphabetically arranged. For most of the stations the following data are presented by months for each of the years in the decade pressure, temperature, precipitation. The information is given in the units sent from each country The volume continues two previous volumes of world weather records published as volumes 79 and 90 of the Smithsonian miscellaneous collections. These earlier volumes, covering through 1920 and 1921 1930, are now in print in new editions containing corrections of known errors in the original editions.

DONN WILLIAM L.

Meteorology with marine applications. New York McGraw Hill Book Company Inc., 1946 465 p. illus 23 cm. $5 00 261

Contents. Introduction and basic principles. Heat and temperature of the air Humidity Atmospheric equilibrium. Condensation and precipitation. Clouds and thunderstorms. Atmospheric pressure. Winds—observation and theory Primary or terrestrial wind circulation. Secondary winds. Tropical cyclones—hurricanes. Weather coding and notation. Air masses and fronts. Development and structure of cyclones. Weather analysis and interpretation. Optical features of the atmosphere. The oceans. Bibliography Appendices Teletype sequence code. Tables of average weather summaries for principal ports and islands. Visual aids. Index.

Note. In simple and readable style this text presents general study of weather changes and their causes, and relates such information to the problems of seamanship and navigation. The purpose of the book is to provide meteorological training for the merchant marine officer It includes such material as will enable him to take accurate weather observations, code and transmit the data to the Weather Bureau, and make for himself local short-period weather predictions. A large number of diagrams, charts, maps, and photographs are incorporated. The author was formerly Head of the Meteorology section at the U. S. Merchant Marine Academy

FULTZ DAVE

Upper-air trajectories and weather forecasting. Chicago University of Chicago Press, 1945 123 p illus. (part col d) 28 cm. (Department of Meteorology of the University of Chicago Miscellaneous reports. No 19) Paper $2.50 262

Contents: Theoretical principles: Hydrostatics Kinematics. Constant absolute vorticity trajectories. Procedure. Empirical results: Observed trajectories. Observations of convergence. Troughs. Ridges. Winds. 10,000 foot charts. 24-hour pressure changes at 10 000 feet. Mean temperatures (sea level to 10,000 feet) Characteristics of large-scale patterns. The surface chart. General conclusions: Example of forecast. Conclusions Bibliography

Note In this work an idea originated by Professor C. G. Rossby of using the computed trajectories of air streams in the forecasting of future air pressure patterns is explained, the technique of its application to practical forecasting is illustrated, and its usefulness is checked empirically in series of maps of air pressure over the U.S.A. at the 10,000-foot level and at the surface for period of about one year. The conclusion is reached that the concept is useful element in forecasting, but that it must be used along with other concepts and techniques. The work is of interest to professional meteorologists.

GARBELL MAURICE ADOLPH

Tropical and equatorial meteorology New York Pitman Publishing Corporation 1947 237 p illus 28 cm. $12 00 263

Contents: General circulation. Air masses in the tropics. The tropical sky *Subtropical anticyclonic cells. Temperate fronts Polar* outbreaks in the tropics. Tropical and intertropical fronts. Tropical cyclones. Violent tropical weather phenomena. Regional tropical weather The American space. The Pacific space. The Asiatic and Indian Ocean space. The Eurafrican space. The Atlantic space. References and bibliography Index.

Note This work explains the causes that underlie tropical weather phenomena, and shows how the customary meteorological concepts must be adapted when applied to them. The idea for the polar front, for example, is shown as inadequate when used indiscriminately to analyze equatorial weather because air masses in low latitudes do not have the sharp temperature differences typical of air masses in high latitudes. The second part analyzes the weather in the five principal land and sea areas lying within 30° north and south of the equator. The treatment is dynamic and synoptic rather than statistical. Numerous graphs, maps, and cloud photographs are used to supplement the text. The work is designed for use in organized courses and also as self-instruction text for airline pilots, ship navigators, and other persons interested in the weather of the tropics.

HAYNES BENARTHUR CASTLE

Techniques of observing the weather New York John Wiley & Sons Inc., 1947 272 p. illus. 21 cm. $4 00 264

Contents The atmosphere The weather observatory Clouds. Visibility Hydrometeors. Temperature. Humidity Wind. Pressure. Precipitation. Winds-aloft observations. Electronic meteorological observations. An improvised weather station. References. Bibliography Appendix Index.

Note There are few digressions into general meteorology in this practical book for the amateur weather observer The text is confined largely to explanations of established techniques of making observations and recording weather data The author has been particularly successful in his chapters on clouds and visibility two aspects of weather observing which depend largely on personal judgment and which vary from hour to hour The observer is taught how to apply scientific method to subjective activity which could easily invite ambiguity The information on instruments is rather general, but is adequate for most beginners. Some of the suggestions for improvisation of instruments are very ingenious. There are brief accounts of new meteorological developments, such as radiosonde, sferics, and automatic weather stations. There is an extensive bibliography and the illustrations are excellent.

HOLMBOE, JORGEN AND OTHERS

Dynamic meteorology by Jörgen Holmboe George E Forsythe and William Gustin. New York John Wiley & Sons Inc. 1945 378 p illus. 22 cm. $5 00 265

Contents Dimensions and units. Thermodynamics of perfect gas. Thermal properties of water substance and moist air Hydrostatic equilibrium Stability of hydrostatic equilibrium The equations of motion Horizontal flow Wind variation along the vertical. Wind variation along the vertical in the surface layer Mechanism of pressure changes Circulation and vorticity Theory of waves in zonal current. Index

Note A basic textbook designed for use by students who are preparing for professional careers in meteorology The treatment is largely mathematical and thus requires previous knowledge of calculus and college physics The first half of the volume is discussion of physical principles, particularly thermodynamics and hydrodynamics, which are the bases of dynamic meteorology Remaining chapters relate these principles to the study of atmospheric behavior There are no problems for the student to solve, and since the work is an elementary one only very few references are given. The authors are associated with the Department of Meteorology University of California at Los Angeles.

MONTGOMERY RAYMOND BRAISLIN AND OTHERS

Convection patterns in the atmosphere and ocean New York The New York Academy of Sciences, 1947 140 p. illus. 24 cm. (New York Academy of Sciences. Annals. Vol. 48 p 705–844 1947) Paper $2 00 266

Contents, Introduction. Problems concerning convective layers, by R. B. Montgomery A summary of the theory of convection cells, by H. Stommel. Internal waves in the atmosphere and convection patterns, by B. Haurwitz. Convective motion in air over the sea, by A. H. Woodcock and J Wyman. Cellular structure of thunderstorm rain, by R. Wexler Observations of vertical temperature and humidity distributions in the convective layer above the sea surface, by R. A. Craig. Convection in the annual temperature cycle of Lake Michigan, by P E. Church. The maintenance of instability in the surface waters of the ocean by J C. Armstrong. Remarks on problems of instrumentation for atmospheric convection studies, by H. R. Byers. Effect of earth's rotation upon convection cells, by W H. Munk. Structure of hurricanes as detected by radar by H. Wexler

Note. The papers comprising this volume were presented in May 1946 at conference sponsored by the New York Academy of Sciences. Each paper describes experimental work and investigations conducted by the authors in an effort to explain some of the phenomena relating to convection layers in the atmosphere and in large bodies of waters. The findings presented are tentative rather than final, and are intended primarily to direct attention to the unsolved problems in this particular phase of oceanography and meteorology

NEUBERGER, HANS HERMANN AND F BRISCOE STEPHENS

Weather and man. New York Prentice-Hall, Inc. 1948 272 p illus. 22 cm. $5 00. 267

Contents Introduction. Part I, What is weather? The atmosphere. Energy earth, and air Weather elements. Atmospheric properties and processes. Air masses. Fronts. Atmospheric circulation. Weather phenomena of stable air. Weather phenomena of unstable air Destructive storms. Climate. The U S. Weather Bureau. Amateur weather forecasting. Part II, Why do we care? Weather and health Weather and agriculture. Weather and architecture. Weather and aviation Weather shipping, and transportation. Weather and public utilities. Weather and the housewife. Weather business, and industry Suggested reading material. Abbreviated psychrometric table. Index

Note Weather phenomena and their importance are the subject of this book for general readers The authors have done an excellent job of explaining in everyday language such terms as dew-point, "adiabatic process, "occluded cold front, and "cyclone"; and of relating the weather and weather forecasting to daily living. In passing, they also debunk number of weather forecasting gadgets such as the so-called Swiss Weather House.

TANNEHILL IVAN RAY

Drought, its causes and effects. Princeton, N J Princeton University Press, 1947 264 p illus. 19 cm $3 00 268

Contents Preface Introduction—Choosing point of view. Droughts and the menacing deserts Famine. Droughts in the United States. Dusters and black blizzards What makes it rain? Why doesn't it rain? The monster in the back yard The drought comes over the mountains. November droughts and the O.B.A. What about the great plains? Hot sun and cool water The atmosphere and its moisture. What about sunspots? What makes the ocean cold? Do droughts come in cycles? Trends and oscillations. Can we control the climate? Is our climate changing? Droughts through the ages. Causes of drought—a summary Appendix. Weather records: Normal rainfall and temperature Average precipitation amounts by states for each month. Charts of normals (Figs. 113 to 118) National rainfall, 1886–1945 Percentages of normal rainfall by months and years for the United States as whole, 1886–1945 Percentages of normal annual rainfall for states east of the Mississippi River Percentages of normal annual rainfall for states between the Mississippi River and the Rocky Mountains Percentages of normal annual rainfall for states from the Rocky Mountains westward to the Pacific coast. Bibliography Index

Note The author's chief purpose in this book has been to assist in establishing method whereby droughts may be predicted. He has advanced the theory that variations in solar radiation are translated into rainfall variations and that rainfall in the United States is dependent on relatively low temperatures over the northern continent and relatively high temperatures over the northern Pacific Ocean These theories are developed through study of the various meteorological processes that affect rainfall The writing is simply phrased and is intended for meteorologists—both professional and amateur—and for farmers.

TANNEHILL, IVAN RAY

Hurricanes their nature and history particularly those of the West Indies and the southern coasts of the United States. Sixth edition. Princeton N J Princeton University Press 1945 275 p illus. 22 cm. $3.00 269

Contents: Introduction. Tropical cyclones. Winds of the hurricane. The storm wave. Origin of West Indian hurricanes. Hurricane tracks. Rainfall in tropical cyclones. Barometric pressures. Signs of the approaching hurricane. Unusual hurricane movements. Frequency of West Indian hurricanes. Destructive effects of hurricanes. Precautionary measures. Early history of West Indian hurricanes. Memorable hurricanes of the nineteenth century. Chronological account of hurricanes of the twentieth century. Chronological list of hurricanes, 1494 to 1900. Bibliography. Index.

Note. (746) This book aims to set down in popular language all the essential facts and theories regarding the tropical cyclone and all the known history in brief form of the hurricanes of the West Indies, the United States and adjacent waters of the Atlantic Ocean, the Gulf of Mexico, and the Caribbean Sea. The present edition brings the record through the year 1944.

THIESSEN ALFRED HENRY, compiler

Weather glossary Washington D C. Government Printing Office 1946 299 p. 23½ cm. (W B no 1445) Paper $0 65 270

Note: An excellent and useful dictionary issued under the auspices of the United States Weather Bureau. It is based on word usage as found in American meteorological works. In most instances the definitions are expressed in terms of scientific meteorology rather than in the common language; therefore the work is more suitable for use by professional meteorologists than general reference use. An occasional definition runs to a page in length; but the typical definition is only six or eight lines long. References are given frequently to fuller discussions of specific terms in standard texts and reference books.

WULF OLIVER R. AND OTHERS

The meteorological conditions in the upper reaches of the radiosonde flights over the United States by Oliver R. Wulf, Mary W Hodge and Stanley J Obloy Chicago The University of Chicago Press 1946 2 v illus. 28 cm. (University of Chicago Department of Meteorology Miscellaneous reports. No 20 21) Paper Part 1 $1.00 Part 2 $0 75 271

Contents: Part 1. Pressures, pressure changes, and types of pressure patterns: The classification of the 10-, 13-, and 16-kilometer pressure patterns according to a few simple types. The method used in the quantitative evaluation of the principal features of the pressure patterns. The seasonal variation of the daily and monthly country-wide average pressures and the range of the daily values. Daily values of the country-wide average pressure and of the average pressures over the West and over the East; pressure changes; north-south and west-east gradient flow. The forms of the pressure patterns and their temporal distribution. Part 2, Diurnal effects in temperature and pressure: The diurnal variation of pressure and temperature in the free air as indicated by radiosonde observations. Concerning the reality of the apparent diurnal pressure differences. Concerning the reality of the apparent diurnal temperature difference. Diurnal change of pressure pattern in individual daily instances. Maps of the monthly mean diurnal pressure difference at 10 kilometers.

Note. This work resulted from the observations that the pressure existing at the base of the stratosphere can be classified into a few simple types presenting rather regular features. Measurements gathered by radiosonde over a period of five years are analyzed and represented graphically from this viewpoint. The work is intended for advanced students of meteorology and professional meteorologists.

CHEMISTRY

DICTIONARIES AND HANDBOOKS

BENNETT HARRY, editor

Concise chemical and technical dictionary Brooklyn Chemical Publishing Company Inc., 1947 1055 p 23½ cm. $10 00 272

Note A wide range of subjects has been covered in this dictionary Although chemical terms predominate there are many terms from mathematics, physics, biology, metallurgy, metalworking, electronics, and a number of other fields. A selection of established trade names is also included. Altogether about 80,000 terms are defined. The definitions are brief, the typical length being 10 to 15 words, but some run to 50 words or more. They are written for persons who have some familiarity with science and technology, rather than for laymen. Another useful feature is the inclusion of a large number of abbreviations and symbols.

CALLAHAM LUDMILLA IGNATIEV

Russian English technical and chemical dictionary New York John Wiley & Sons, Inc. 1947 794 p illus. 20 cm. $10.00 273

Note The scope of this dictionary is somewhat wider than the title indicates. Chemistry accounts for the largest number of terms, and engineering runs second, but there are also many terms from such fields as mathematics, meteorology agriculture botany and medicine. Also included are such words as legislator manuscript, mandate, and steppe. The author justifies their inclusion on the ground that they are encountered in technical articles, but it would appear that some of them could have been omitted. The total number of words included appears to be between 40,000 and 80,000. As the title indicates, the translation is from Russian to English, not English to Russian.

HANDBOOK OF CHEMISTRY AND PHYSICS a ready reference book of chemical and physical data. Thirtieth edition revised. Editor in chief Charles D Hodgman. Cleveland Chemical Rubber Publishing Co 1948 2686 p illus 19 cm. U.S $6 00 foreign countries $6.50 274

Contents (abridged) Antidotes of poisons. Burns and scalds. Fire precautions and chemical hazards. Mathematical tables. Properties and physical constants. General chemical tables. Specific gravity and properties of matter Heat. Hygrometric and barometric tables. Sound. Electricity and magnetism. Light. Quantities and units. Miscellaneous.

Note. (809) Approximately 140 pages of new type representing both revised old material and added new material are found in the thirtieth edition of this standard reference work for scientists and engineers. Information concerning radioactivity and isotopes which was formerly scattered in several separate tables has been brought together in a single compilation. A more complete table of natural logarithms is included. The physical properties of natural and synthetic rubbers are now tabulated over a wide range. New information on vitamins and other parts of food chemistry is presented including a new table of dietary allowances. The viscosity section has been revised and enlarged, and the former table showing persistent lines of the elements has been replaced by an improved list. A new edition is scheduled for publication in 1949

LANGE, NORBERT ADOLPH

Handbook of chemistry a reference volume for all requiring ready access to chemical and physical data used in laboratory work and manufacturing compiled and edited by Norbert Adolph Lange assisted by Gordon M Forker with an appendix of mathematical tables and formulas by Richard Stevens Burington. Sixth edition revised and enlarged. Sandusky Ohio Handbook Publishers, Inc., 1946 1767 270 p. illus. 20 cm. $7 00 275

Note: (810) A standard reference book for chemical laboratories and the offices of chemists and physicists. In the first part—which in this edition runs to 1767 pages, exclusive of the index—there is data—much of it tabulated—on such topics as atomic weights and numbers, physical constants of the elements, physical constants of inorganic and of organic compounds, flame temperatures, the composition of commercial metal alloys, the properties of materials of construction, indices of refraction of various substances, etc. As indicated in the title, the second part is a compilation of useful mathematical tables and formulas. Changes made in preparing the work for this edition are important, but as they are explicitly described in the preface they will not be mentioned here. The most notable one is a complete revision of the table of physical constants of inorganic compounds, which now furnishes data on 2605 compounds. A new edition is scheduled for publication in 1949.

HISTORY

JAFFE, BERNARD

Crucibles the story of chemistry from ancient alchemy to nuclear fission. Revised edition. New York Simon and Schuster Inc., 1948 480 p. illus. 21 cm. $3 95 276

Contents. Bernard Trevisan (1406–1490) Theophrastus Paracelsus (1493–1541) John Joachim Becher (1635–1682) Joseph Priestley (1733–1804) Henry Cavendish (1731–1810) Antoine Laurent Lavoisier (1743–1794) John Dalton (1766–1844) John Jacob Berzelius (1779–1848) Amedeo Avogadro (1776–1856) Friedrich Woehler (1800–1882) Dmitri Ivanovitch Mendeleeff (1834–1907) Svante Arrhenius (1859–1927) Marie Sklodowska Curie (1867–1934) Joseph John Thomson (1856–1940) Henry Gwyn Jeffreys Moseley (1887 1915) Irving Langmuir (1881–) Ernest Orlando Lawrence (1901–) The men who harnessed nuclear fission. Nuclear energy tomorrow Sources and bibliography Index.

Note A famous popular account of the growth of chemical knowledge It is constructed on a framework of lives of great chemists, but it is not—as the chapter titles seem to indicate—a collection of short biographies. The whole panorama of developing knowledge is presented simply and dramatically without the use of mathematics or chemical notation. The first edition was published in 1930. In this edition three chapters have been added and another has been revised. The bibliography has been revised.

WEEKS MARY ELVIRA

Discovery of the elements With illustrations collected by F B Dains. Fifth edition enlarged and revised. Easton Pa. Journal of Chemical Education 1945 578 p. illus. 24 cm. $4 00 277

Contents (abridged) Elements known to the ancient world. Elements known to the alchemists Some eighteenth-century metals. Daniel Rutherford and his services to chemistry The scientific contributions of the de Elhuyar brothers. The Klaproth-Kitaibel correspondence on the discovery of tellurium. The chemical contributions of Charles Hatchett. The scientific contributions of Don Andrés Manuel del Río. The platinum metals. Three alkali metals—potassium, sodium, and lithium The alkaline earth metals and magnesium and cadmium Some elements isolated with the aid of potassium and sodium—zirconium, titanium, cerium, and thorium. Some spectroscopic discoveries. The periodic system of the elements. Some elements predicted by Mendeleeff The rare-earth elements. The

halogen family. The inert gases. The natural radioactive elements. Recently discovered elements. Chronology. Appendix. Index.

Note. (311a) A skillfully arranged history of the discovery of the chemical elements. The discovery of each of the elements known today is described, with all the important steps in the research and discovery. The narrative is highlighted with incidents from the biographies of scientists, and illustrated with more than three hundred photographs and other reproductions. Compared with the previous edition (1939) the book has been expanded about hundred pages, numerous additional references have been listed in the chapter bibliographies; the chapter on Recently discovered elements and the Chronology have been brought up to date; and list of the chemical elements has been added.

GENERAL CHEMISTRY

BABOR, JOSEPH ALBERT

Basic college chemistry New York Thomas Y Crowell Company 1946 701 p. illus. (part col d) 22 cm. $4.25 278

Contents (abridged) Some fundamental concepts. Atomic theory and atomic structure. Classification of the elements: periodic system. Oxygen. Hydrogen. The alkali metals. The halogens. Oxidation-reduction. Solutions. Chemical equilibrium. Modern theory of ionization. Ionic equilibria and ionic reactions. The atmosphere and the inert elements. Nitrogen and ammonia. Elements of the sulfur family. Elements of the phosphorus family. Carbon and silicon. Germanium, tin, and lead. Iron, cobalt, nickel, and the platinum metals. Copper, silver and gold. Zinc, cadmium, and mercury. Metals of the vanadium, chromium, and manganese families. The scandium and titanium families: the rare earth elements. Radioactivity and atomic energy. Electrochemistry. Colloidal chemistry. Organic chemistry. Carbohydrates, food and nutrition. Appendices. Index.

Note. In an effort to keep down the length of this introductory textbook the author developed new arrangement of the periodic table, and has organized the book in accordance with it. The new periodic table has interesting features, and good deal of ground is covered in the book in no more than the usual space. Most of the text is concerned with theory and basic phenomena, but considerable space is devoted to concise descriptions of applications of chemistry in industry.

BRINKLEY STUART ROBERT

Introductory general chemistry Third edition. New York The Macmillan Company 1945 645 p. illus. 21 cm. $4 75 279

Contents (abridged) Changes in substances—the atomic theory. Oxygen, the atmosphere. States of matter—the kinetic theory. Solutions. Chemical equilibrium. Determination of molecular and atomic weights. The alkali metals and hydrogen. The halogens and hydrohalic acids. The periodic system. Atomic structure. Ionization. Acids, bases, ampholytes, hydrolysis. Analytical separations of metal ions. Oxidation-reduction in solution. Sulfur sulfuric acid. Nitrogen, ammonia, nitric acid. The phosphorus family of elements. The colloidal state of dispersion. The metallic elements. The alkaline earth metals. Hydrocarbons. Derivatives of the hydrocarbons. Problems. Appendix. Index.

Note: (423) The most important changes in the third edition of this standard textbook are the new order in which the topics are presented, and the re-defining of acidity-basicity concepts in terms of the proton donor-acceptor theory. The Brønsted definitions are now used throughout the book thus simplifying the discussions. The book is intended for college students who are beginning the study of chemistry.

DEMING HORACE GROVE

Fundamental chemistry an elementary textbook for college classes Second edition New York John Wiley & Sons Inc. 1947 745 p illus. 22 cm. $4 00 280

Contents This changing universe. Elements and compounds. Atoms and molecules. Weights and formulas. Oxygen. Energy. Hydrogen. The properties of gases. Moles and molal properties. Liquids. Solids. Changes of state. Preparation of acids—valence. How ions are formed. Properties of acids. Chlorine. The periodic table. Within the atom. Building molecules. Oxidation and reduction. The halogens. Solutions. The sulfur family. Reaction rate. Chemical equilibrium. The atmosphere. Nitrogen. The relatives of nitrogen. Hydrolysis—hydrogen ion concentration. Precipitation. The colloidal state of matter. Carbon. Organic chemistry. Some famous syntheses. Silicon and boron. The metals. Electrochemistry. The light metals. The transition metals. Iron and steel. The post-transition metals. Nuclear chemistry. Chemistry and the spirit of science. Appendices. Index.

Note. The author one of the most successful American writers of chemical textbooks, has incorporated in this one several novel features of content and organization. The book is designed for courses offered to students who plan to take additional work in the subject. It deals less with industrial applications of chemistry than does his *General chemistry* fifth edition, New York, 1944 and differs from his *Introductory college chemistry* second edition, New York, 1942, by placing more emphasis on principles and less on historical details. Changes made in the present edition include some rewriting and rearranging and the addition of material on new developments such as silico-organic compounds, antibiotics, and nuclear chemistry

EHRET WILLIAM FREDERICK

Smith s college chemistry Sixth edition. New York D Appleton-Century Company Incorporated 1946 677 p illus. 26 cm. $4 75 281

Content (abridged) The chemical view of matter. Chemical change and some methods of studying it. The atomic theory. Symbols, formulas, and equations. The velocity of chemical reactions. The measurement of gases. Solution. The periodic classification of the elements. Radioactivity and the transmutation of elements. Atomic numbers, atomic nuclei, and isotopes. Atomic structure and valence. Energy and chemical change. Chemical equilibrium. Solutions of electrolytes. Newer concepts of acids and bases. Oxidation and reduction. The atmosphere and its inert components. The hydrocarbons and their simple derivatives. Plant life and products. Animal life and natural products. Synthetic organic products. Colloidal suspensions. The metallic elements. Electromotive chemistry and voltaic cells. Appendix. Index.

Note. (433) This classic among chemistry textbooks has here been given another excellent revision. The plan and much of the substance of the book remain the same, but many changes have been made in the text to bring the exposition in line with current theories and to incorporate new knowledge. These changes vary from minor ones to the complete rewriting of number of chapters. Many new illustrations have been added, and the problems and lists of references have been revised.

ELDER ALBERT LAWRENCE AND OTHERS

Textbook of chemistry by Albert L. Elder, Ewing C Scott and Frank A. Kanda. Revised edition New York Harper & Brothers, 1948 758 p illus 24 cm. $4.50 282

Contents (abridged) Methods used in the discovery of the elements. The particle nature of matter. The electrical nature of matter. Types of chemical reactions. Properties of liquids and solids. Water, acids, and bases. Properties of ions. Salts. Chemical equilibria. Water—its purification and uses. Colloids. *Characteristics of the metals.* Nuclear chemistry. Carbon and its compounds. Appendix. Index.

Note: (431) Although intended for use in courses provided for students who will become professional chemists, this comprehensive text is characterized by readable style, frequent references to current techniques and manufacturing processes, and an abundance of illustrations. These qualities make it useful also to persons out of college who are "brushing up" on general chemistry. The most obvious changes in this edition as compared to the first edition (1941) are rewriting of the first seven or eight chapters and the addition of new chapter on nuclear chemistry.

HILDEBRAND JOEL HENRY

Principles of chemistry Fifth edition. New York The Macmillan Company 1947 446 p illus. 22 cm. $4.50 283

Contents Kinds of matter. Weight relations in chemical reactions—atoms and molecules. The kinetic theory. Molecular weights. The relation of chemical and physical properties to atomic structure. Concentration, acidimetry, and alkalimetry. Thermochemistry. Electrolytic dissociation. Combining proportions. Chemical nomenclature. The speed of chemical reactions. Chemical equilibrium—the effect of concentration. Types of equilibria. The effect of pressure and temperature upon equilibrium. Oxidation and reduction. The constitution of the atom. The periodic system of elements. Organic chemistry. Dispersed systems. Solubility. Carbonic acid and its ions. Acid base systems. Structures of inorganic compounds. Appendices. Index.

Note: (315) An introductory textbook which has been widely used in American colleges for many years. The treatment is concise,

and much more information is included than the relatively small number of pages would indicate. Theory nomenclature, and fundamental phenomena are emphasized, and there are very few references to applications. In preparing this edition two new chapters were added, and many former sections were revised or rewritten. The book is offered separately as described above, and also bound in single cover with W M. Latimer and J H. Hildebrand, *Reference book of inorganic chemistry* revised edition, New York: The Macmillan Co., 1940 (841)

LONG JAMES SCOTT, AND H. V ANDERSON

Chemical calculations Fifth edition. New York McGraw Hill Book Company Inc. 1948 401 p illus 23 cm. (International chemical series Louis P Hammett, consulting editor) $3 75 284

Contents Measures and weights. The measurement of temperature. Density Effects of changes in pressure and temperature on the volume of gases. The language of chemistry Gram-atom and gram-mole. Mole-weight-gas-volume relations. Derivation of chemical formulas. Chemical equations, nonredox type. Oxidation reduction. Gram-equivalent. Molar and normal concentration. Principle of equivalency Combination of gases. Thermochemical reactions Electrochemistry Chemical equilibrium reversible reactions. Solubility-product principle. Appendix. Index.

Note. (841) A long-established college textbook. The discussions of theory are somewhat fuller than in the average elementary text. In this edition the work has been revised to include large number of worked examples. The authors' object in making this change was to reduce the time formerly devoted to the classroom discussion of problem-solving but the change also makes the book more useful in self-instruction. Abbreviations and symbols have been revised to conform to the forms approved by the American Standards Association.

MASSON LOUIS TALWIN

Chemistry made easy edited by Carl H. Rasch and Irma L Hayes. Garden City N Y Garden City Publishing Co Inc. 1947 416 p illus 21 cm. $1 98 285

Contents (abridged) Our chemical world. Measurement—the basis of chemistry Elements—the A.B C. of matter Compounds and mixtures. Oxygen—the indispensable. Hydrogen—nature's lightweight. Water—the essential liquid The electron theory Valence and formula writing. The balanced equation. The mathematics of chemistry The halogens—a typical family Acids and bases—the chemical enemies. Neutralization and salts Ionization—the charge of the atoms Sulfur—the golden nonmetal. The atmosphere—our invisible ocean. Nitrogen and its compounds Carbon—man's versatile helper Carbon oxides and gaseous fuels. Metals—nature's stalwarts. The alkali metals. Iron and steel—nature's heavyweights. Aluminum—a metallic lightweight. Calcium and its compounds Organic chemistry—hydrocarbons and petroleum. Alchemy in the atomic age Index.

Note. An introductory textbook written primarily for secondary-school students which presents basic concepts briefly and graphically in terms of everyday life The simplicity of the author' style and the relative inclusiveness of the book make suitable also for self-instruction. The subject is divided into short, factual paragraphs accompanied by so-called "visigraphs, cartoon-like illustrations, which should be of considerable aid to visual-minded students. In proportion to the text, the number of exercises and questions in each chapter is larger than commonly found The appendix includes list of famous chemists and their contributions, glossary and other useful information in tabulated form.

PAULING LINUS

General chemistry an introduction to descriptive chemistry and modern chemical theory Illustrations by Roger Hayward. San Francisco W H. Freeman and Company 1948. 618 p illus. 22 cm. (A series of chemistry texts Linus Pauling editor) $4.25 286

Contents (abridged) The nature and properties of matter Elements, elementary substances, and compounds. Chemical elements and the periodic law Weight relations in chemical reactions. Ions, ionic valence, and electrolysis Oxidation-reduction reactions. The laws of electrolysis. Electrolytic processes. The properties of gases. The properties of solutions. The rate of chemical reactions. Chemical equilibrium. Acids and bases. Solubility product and precipitation. Complex ions. Organic chemistry Thermochemistry Oxidation-reduction equilibria. Radiochemistry Appendix. Index.

Note A distinguishing feature of this introductory college textbook is that the exposition is based completely on modern knowledge of the atom. A moderate amount of descriptive chemistry—that is, accounts of applications in industry etc. of chemical principles—is included, but most of the space is given to theoretical aspects. A concise summary entitled "Concepts, facts, and terms introduced in this chapter is included at the end of most of the chapters and is valuable aid in study There are short selected lists of references to additional reading and of course numerous problems for the student to solve. Many of the illustrations are reproductions of three-dimensional drawings based on molecular models. The same publisher has issued L. E. Mahn and H. W Frantz, *A laboratory course for Pauling' General chemistry* San Francisco, 1948, 178 p.

RICHARDSON, LEON BURR, AND ANDREW J SCARLETT

General college chemistry Fourth edition. New York Henry Holt and Company 1947 704 p illus 24 cm. $4 50 287

Contents (abridged) The scientific method—the work of the chemist. The laws of chemical combination—the atomic theory—chemical notation. Valence—the periodic system of Mendeléeff. Radioactivity—subatomic particles. The structure of atoms. Mass-energy relationships—nuclear fission—the atomic bomb. The arrangement of the planetary electrons. Energy in chemical change. Oxygen and ozone. Hydrogen. The gaseous state—the kinetic-molecular theory The liquid state—water—hydrogen peroxide The solid state. Atomic and molecular weights. Calculations. Reversible reactions—equilibrium in chemical change. Solutions. Ionization in solution—electrovalent compounds. Acids and bases—protolysis. The halogen elements—chlorine and hydrochloric acid. Fluorine—bromine—iodine. Carbon. The hydrocarbons and their derivatives—fuel gases—flame The alkali metals Iron, cobalt, and nickel. The platinum metals Synthetic organic products. Index.

Note (830) In its present revision this first year textbook has been completely rewritten and partly rearranged. There is new chapter on nuclear fission, and practically all of the illustrations are new Chapter exercises and problems have been included which illustrate the applications of chemical theory and reading lists have been revised As in earlier editions, both theory and applications are covered, but theory is not subordinated to descriptive matter. More material is included than is presented in many contemporary texts written at the same level. The authors have written *Laboratory manual of general college chemistry* New York Henry Holt and Company 1947 159 p., $1.90, for use in conjunction with this text.

SCHOCH EUGENE PAUL AND OTHERS

General chemistry by Eugene P Schoch, William A. Felsing and George W Watt. Second edition. New York McGraw Hill Book Company Inc. 1946 540 p illus. 24 cm. (International chemical series, Louis P Hammett, consulting editor) $4 00 288

Contents (abridged) Forms of matter Weight relationships. Properties of gases Relative weights of molecules. Solutions. Acids, bases, and salts, nomenclature. Reversible reactions and chemical equilibrium. Classification of the elements Atomic numbers and the structures of atoms. Nuclear chemistry Ionization. Types of chemical reactions. Colloids Ionic equilibria. Electrolysis. Industrial electrochemical processes. Oxidation and reduction Metals and alloys Halogens and compounds of the halogens Commercial production of acids and bases. Commercial production and utilization of salts Organic chemistry Appendix. Visual aids Index.

Note (831) An introduction to the fundamentals of chemistry as written for first year college students. This edition has been revised by George W Watt, and although the general scope and purpose of the previous edition have been retained, the material has been extensively revised and rearranged to conform with the viewpoint of the new author Thus laboratory directions have now been removed for inclusion in separate laboratory manual. Review exercises and brief reading lists are included in each chapter

STRONG RALPH KEMPTON

Chemistry for the executive, a layman's guide to chemistry Original drawings exe-

cuted by Paul E. Mead from sketches by the author New York Reinhold Publishing Corporation, 1946 445 p illus. (part col'd) 23 cm. $6.00. 289

Contents: On the chemical element. On oxides. On acids and bases. On gases and chemical formulas. On chemical transformations. On solutions and liquids. On crystals and solids. On the colloidal state. On earthy materials. On organic materials—hydrocarbons. On organic materials—oxygen-function compounds. On organic materials—nitrogen function compounds. On food materials. On fuel materials. On metallic materials. On synthetic materials. On the economic scope of things chemical. Index.

Note. As the title suggests, this volume is intended to provide the business man or executive with knowledge of the basic principles of chemistry. In an effort to avoid the formality of the usual chemistry text, the author presents the information in the form of conversations between a professional chemist and an executive interested in obtaining a general knowledge of chemistry. The success of this question-and-answer method is evidenced by the teaching clear and succinct explanations. Considerable data on the economic aspects of chemistry are included. Each chapter concludes with a summary of the main points discussed, and most of them with a list of references for further reading.

WHITTAKER ROLAND MAPES

Rudiments of chemistry the chemist's view of the nature of matter New York The Ronald Press Company 1947 310 p. illus 21 cm. $3.00 290

Contents (abridged). Fundamental ideas. Classification and properties of matter. Changes in matter. Symbols, formulas, equations. Nucleonics. The atoms change; chemical reactions occur. The larger units of matter. The three states of matter. Molecular and atomic weights. The dispersed condition. Ionization and electrolytes. Chemical equilibrium. Appendices: Units and conversion factors. The expression of numbers. Suggested lecture demonstrations. Index.

Note. An interesting and successful attempt to expound concisely the basic chemical laws, theories, and phenomena without cluttering the text with accounts of chemical industries and other descriptive material. Special emphasis is placed on modern theories of atomic structure. Chapter reading lists refer the reader to related periodical articles, text- and reference-books for fuller treatments of the various topics. The book is suitable for use in cultural or survey-type college courses in chemistry and may also be studied with profit and enjoyment by the lay reader. The author is Associate Professor of Chemistry at Queens College, New York.

INORGANIC CHEMISTRY

INORGANIC SYNTHESES. Volume II. W Conard Fernelius editor-in-chief New York McGraw Hill Book Company Inc., 1946 293 p illus. 23 cm. $4 00 291

Contents (abridged). Copper(I)chloride. Recovery of silver and iodine from silver iodide residues. Metal derivatives of 1,3-diketones. Fused boron oxide. Ammonium tetrafluoborate. The rare earth elements and their compounds. The separation of cerium from rare earth mixtures. Fractional crystallization—the magnesium rare earth nitrates. Monosodium acetylide (ethynylsodium). Ammonium carbamate. Alkali metal cyanates. Silica gel. Germanium(II)iodide. Thorium(IV)bromide. Nitric oxide [nitrogen(II)oxide]. Ammonium azide. Phosphonium iodide. Ammonium dithiophosphate. Sulfites and pyrosulfites of the alkali metals. Salts of dithionic acid. Sulfamic acid. Potassium nitridotrisulfate. Chromium(III)oxide gel. Potassium monochlorochromate. Trisodium orthoperiodate (sodium paraperiodate). Potassium hexacyanomanganate(III). Hexamminecobalt(III) salts. Potassium hexacyanocobaltate(III). The metal carbonyls. Platinum(IV)chloride. Appendix: The nomenclature of inorganic compounds. Index of contributors. Subject index.

Note: The purpose of this series is to make available new or improved methods for the preparation of inorganic compounds. For each synthesis, this information is given: Equation, name of chemist who submitted it, name of chemist who checked it, brief preliminary discussion of the reaction and procedure, specific directions for the procedure, a description of the properties of the compound prepared, and a list of related literature. The present volume contains eighty-one syntheses. The subject index covers both this volume and volume I, issued in 1939.

JACOBSON, CARL ALFRED, compiler and editor

Encyclopedia of chemical reactions. Volume I New York Reinhold Publishing Corporation 1946 804 p 24 cm $10.00 292

Contents: Aluminum reactions. Antimony reactions. Arsenic reactions. Barium reactions. Beryllium reactions. Bismuth reactions. Boron reactions. Bromine reactions. List of abstracters. Index to reagents. Index to substances obtained.

—— Volume II New York Reinhold Publishing Corporation 1948 917 p 24 cm. $12 00 293

Contents: Abbreviations. Cadmium reactions. Calcium reactions. Carbon reactions. Cerium reactions. Cesium reactions. Chlorine reactions. Chromium reactions. List of abstracters. Journals used by abstracters. Index to reagents (formulas). Index to reagent (names). Index to substances obtained (formulas). Index to substances obtained (names).

Note. A reference book which is designed to provide short statements of all reported inorganic reactions. The arrangement is alphabetical, first by chemical elements, then under each element by reactant and reagent. The information given for each reaction varies but always includes an expression of it in equation form, and a reference to the original source. Brief data on procedures, conditions, and properties of the products are given in many instances. The two volumes described here give information on approximately 6400 reactions.

YOST, DON M AND OTHERS

The rare-earth elements and their compounds, by Don M Yost Horace Russell Jr and Clifford S Garner New York John Wiley & Sons Inc., 1947 92 p illus. 24 cm. $2.50 294

Contents. Electronic structures and oxidation states of the rare-earth elements. Paramagnetic properties of rare-earth compounds. Absorption spectra of rare-earth compounds. Evidence for the existence of element 61. Separation of the rare earths. Chemical and physical properties of the rare earths. Appendices: Nuclear properties of the rare-earth elements. General physical constants. The periodic system of the elements. Index of names. Subject index.

Note. Scientific interest in the rare earths has recently been stimulated by the discovery of some of these metals among the fission products of uranium and thorium. This survey of the current knowledge of the chemical and physical properties of the elements in this periodic group will be useful chiefly to graduate chemists and physicists. In the chapter on Element 61, the authors conclude that at the time of writing their manuscript the evidence of its discovery was not conclusive. The text includes numerous references to the related literature.

ANALYTICAL CHEMISTRY

ALTIERI VETO JOSEPH

Gas analysis & testing of gaseous materials. New York American Gas Association Inc., 1945 567 p illus. 23 cm. $7.50 295

Contents: Introduction. The composition of gases. Measurement of quantity and flow of gas. Selection of method of sampling. Apparatus and reagents. Common operations. Calculations of gas analysis. Official inspection and testing. The Hempel type of apparatus and method. The Orsat apparatus and its modifications. The Elliott and Morehead methods. The Shepherd apparatus and methods. Methods for small amounts of nitric oxide, carbon monoxide, olefins, oxygen, hydrogen sulfide, cyanogen, and hydrocyanic acid. Dusts, sprays, fumes, mists, and similar dispersoids. Liquefaction and distillation methods of analysis. The determination of sulfur compounds. Light oils in gas. Naphthalene in gas. Density and specific gravity. Analysis of raw gases. Appendix: List of illustrations. List of tables. Bibliography. Name index. Subject index.

Note. This work is intended to supersede the gas analysis portion of the *Gas chemists' handbook*, New York, 1929 and a small amount of material that appeared in that work has been included. The present work is intended for use by gas chemists as a guide to standard procedures of analyzing and testing. Specific directions for apparatus, procedure and interpretation of tests are given.

There are many illustrations of apparatus. The appendix contains about forty pages of useful reference data, and there is an extensive bibliography

AMERICAN SOCIETY FOR TESTING MATERIALS

Index to the literature on spectrochemical analysis Part II 1940–1945 by Bourdon F Scribner and William F Meggers. Philadelphia The American Society for Testing Materials 1947 180 p. 23 cm. Paper $3 00 296

Note (937) An extension by approximately 1050 entries of the 1920–1939 bibliographic index of the same subject, published by the A.S.T.M. in 1939 Unlike the earlier publication, each entry in this one is accompanied by an abstract of the article cited. The international literature is covered.

AMERICAN SOCIETY FOR TESTING MATERIALS COMMITTEE E-2 ON SPECTROCHEMICAL ANALYSIS

Report on standard samples for spectrochemical analysis 1947 compiled by A.S T.M Committee E-2, subcommittee IV on Standards and Pure Materials, C. H. Corliss, chairman. Philadelphia American Society for Testing Materials 1947 23 p. 23 cm. (Technical publication no 41 B) Paper $1 25 297

Contents The available standard samples. Iron and steel. Aluminum and its alloys. Magnesium and its alloys. Zinc, lead, and tin alloys. Copper alloys Miscellaneous materials: Standard samples of steel-making alloys, ores, and ceramic materials of the National Bureau of Standards. Higher synthesized mixtures and solutions. Pure metals and salts. Electrode materials.

Note. In a series of 34 tables accompanied by explanatory text this report gives the exact chemical analyses of standard samples obtainable from approximately a dozen suppliers whose names and addresses are included. It replaces a report on the same subject that was issued in 1944

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on pH measurement. Forty ninth annual meeting American Society for Testing Materials Buffalo N Y June 24–28 1946 Philadelphia American Society for Testing Materials 1947 79 p illus 23 cm. (Technical publication no 73) Paper $1 50 298

Contents. Introduction, by E. B Ashcraft. Historical review of the hydrogen electrode and the calomel cell in the measurement of hydrogen ions, by C. N Myers. Definition of pH and extension of the acidity scale to nonaqueous systems, by D. S. McKinney, Paul Fugassi, and J. C. Warner. Standard buffer solutions, by G. G. Manov Recent advances in the theory and use of glass electrodes for pH determinations, by M. Dole. Precautions to be observed in making colorimetric pH determinations, by F R. McCrumb. Acid base equilibria in aqueous and nonaqueous solutions, by M Kilpatrick. The potentiometric estimation of hydrogen ion concentration in nonaqueous media, by L. Lykken.

Note. The most recent colorimetric and potentiometric theory and practice in making pH and similar measurements are presented here for the information and guidance of analytical chemists. Approximately 140 related books and periodicals are cited Each paper is accompanied by a report of the discussion at the meeting

BINKLEY WENDELL W AND MELVILLE L. WOLFROM

Chromatography of sugars and related substances. New York Sugar Research Foundation Inc., 1948 33 p illus. 23 cm. (Scientific report series. No 10) Paper, Gratis. 299

Contents: General procedures and definitions of terms Historical review Application of the chromatographic method to sugars and sugar derivatives (with experimental details) Bibliography Author index.

Note A brief review of chromatographic adsorption methods of analysis as they are applied in the separation and identification of various sugars. The construction and operation of the chromatographic apparatus and the actual techniques and procedures of analysis are described in detail. References cited in the text are keyed to the two-page bibliography

BURK, ROBERT EMMETT, AND OLIVER GRUMMITT, editors

Major instruments of science and their applications to chemistry New York Interscience Publishers Inc. 1945 151 p illus. 23 cm (Frontiers in chemistry Volume IV) $2 50 300

Contents Electron diffraction and the examination of surfaces, by Lester H. Germer The electron microscope and its applications, by L. Marton. X-ray diffraction and its applications, by Maurice L. Huggins. Chemical spectroscopy by W R. Brode. Application of absorption spectra to chemical problems, by W R. Brode. The infrared spectrometer and its application, by R. Bowling Barnes. Subject index.

Note. As in earlier volumes of this series, the text represents lectures that were delivered at Western Reserve University in a series that is designed to inform graduate students and professional chemists of new developments and current research. Selected bibliographies accompany each lecture, and portraits and biographical sketches of the contributors are included.

CHERONIS NICHOLAS DIMITRIUS, AND JOHN B ENTRIKIN

Semimicro qualitative organic analysis. New York Thomas Y Crowell Company 1947 498 p illus. 24 cm. $4.50 301

Contents. Part I, Semimicro qualitative organic analysis: Introduction. Semimicro laboratory techniques in purification of organic compounds and determination of physical constants. Preliminary steps in the examination of organic compounds. Classification by solubility Charting the experimental course. Specific class tests. Selection of the probable compound. Important organic reactions. Preparation of derivatives. Separation of mixtures. Chromatographic analysis. Problems Part II, Tables. Appendix. Indexes.

Note A combination textbook and laboratory manual that is designed for introductory college courses in organic analysis. Relatively small quantities of materials are called for in the directions for experiments, thus both money and time are saved for the college and the student. Forty-two tables that give data on the melting points of derivatives and the other information pertinent to qualitative analysis together with the detailed directions for analytical procedures are given in the appendix. These should be useful to advanced students and practicing chemists as well.

ENGELDER CARL JOHN

Fundamentals of semi-micro qualitative analysis. New York John Wiley & Sons, Inc., 1947 385 p. illus 22 cm. $3.50 302

Contents: Part I, The cations: Introduction—reactions and equations—apparatus and technique—reagents The theory of solutions—the analytical grouping of the common elements—the alkali metals. The law of chemical equilibrium, the theory of precipitation the solubility-product principle—the alkaline earth elements. The elementary theory of oxidation and reduction—the theory of amphoterism—the theory of complex ions—the elements of group III. Ionization equilibria and buffer action the elements of groups and II. Part II, The anions: The classification of the anions—the anions of group I The pH value of solutions. The theory of neutralization and hydrolysis—the anions of groups and III. The anions of groups IV and V—the electrochemical theory of oxidation Part III, Systematic analysis: Systematic analysis. Appendix Colloids. Exponents and logarithms. Tables. Index.

Note. In this introduction to the basic principles and methods of qualitative analyses every effort has been made to integrate theory and practice, so that each phase of experimental work is

accompanied by the appropriate theoretical preparation. Review questions and problems are given in sufficient number to eliminate the need for a special problem book. Although the text is based, to some extent, on an earlier volume *Semi-micro qualitative analysis*, New York, 1940, of which Engelder was senior author, the fresh approach to the subject and the inclusion of new materials justify its consideration as a new work.

FLAGG, JOHN FERARD

Organic reagents used in gravimetric and volumetric analysis New York Interscience Publishers Inc. 1948 300 p illus. 24 cm. (Chemical analysis Vol. IV) $5.00 303

Contents: General discussion. Organic compounds as precipitants for inorganic ions. Some properties of organometallic precipitates. Separations by means of organic reagents. Theory of the solubility of salts with a common anion. Techniques in gravimetric and volumetric analysis with organic reagents. Special reagents. Anthranilic acid. The arsonic acids. α-benzoin oxime. Ammonium nitrosophenylhydroxylamine (cupferron). The α-dioximes. 8-hydroxyquinoline (oxine). Miscellaneous reagents. nitroso-β-naphthol. Picrolonic acid. Precipitants for anions. Quinaldic acid. Salicylaldoxime. Tannin. Thionalide. Appendix. Author index. Subject index.

Note. This volume deals essentially with those organic compounds which form insoluble organometallic salts when used for the detection or determination of organic or inorganic substances. The introductory chapters discuss the fundamental principles of organic chemistry as relating to organic reagents, and describe the special techniques employed when using these reagents in gravimetric and volumetric analyses. The remainder and greater part of the volume is devoted to a detailed description of various organic precipitants as regards behavior, characteristics of the complexes formed, reaction with various ions, types of analysis to which best suited, and finally the actual analytical procedures.

HAMILTON, LEICESTER FORSYTH, AND STEPHEN G SIMPSON

Calculations of analytical chemistry formerly published under the title, *Calculations of quantitative chemical analysis* 4th edition New York McGraw Hill Book Company, Inc. 1947 387 p illus. 21 cm. (International chemical series. Louis P Hammett, consulting editor) $3.50 304

Contents: Part I, General analysis: Mathematical operations. Chemical equations. Calculations based on formulas and equations. Concentration of solutions. Equilibrium constants. Oxidation potentials. Part II, Gravimetric analysis. The chemical balance. Calculations of gravimetric analysis. Electrolytic methods. Calculations from reported percentages. Part III, Volumetric analysis: Calibration of measuring instruments. Neutralization methods (acidimetry and alkalimetry). Oxidation and reduction ("redox") methods (oxidimetry and reductimetry). Precipitation methods (precipitimetry). Complex-ion formation methods (complexometry). Part IV Electrometric methods: Potentiometric titrations. Conductometric titrations. Amperometric titrations. Part V Gas analysis. Calculations of gas analyses. Part VI, Common analytical determinations. Part VII, Problems on specific groups and determinations. Appendix. Index.

Note: (894) Previous editions of this well-established text dealt only with quantitative chemical analyses. This edition has been expanded to cover qualitative analyses, hence the change in title. The widened scope has necessitated some rearrangement of the original material and inclusion of the new chapters on conductometric and amperometric titrations. The chapter on equilibrium constants has been enlarged, and the discussion of logarithms has been added. The rest of the book remains unchanged—to assist the college student in learning to solve practical problems and interpret analytical data.

HOGNESS, THORFIN RUSTEN AND WARREN C. JOHNSON

Qualitative analysis and chemical equilibrium. Third edition New York Henry Holt and Company 1947 553 p illus. 22 cm. $3.20 305

Contents (abridged) Part I Electrolytes and non-electrolytes. The structure of atoms and molecules. Reaction velocity and chemical equilibrium. Equilibria involving weak acids and bases. Heterogeneous equilibrium—the solubility product—colloids. The ionization of water—hydrolysis. Complex ions. Amphoteric substances. Oxidation-reduction equilibria. Part II: Laboratory techniques. The alkali metal group of ions. The silver group. The copper-arsenic group. The alkaline earth group of ions. Analysis of the positive ions. Identification of the negative ions. Appendix: List of reagents. Table of ionization constants of weak acids. Table of ionization constants of weak bases. Table of solubility product constants. Table of dissociation constants of complex ions. Table of electron configurations of the elements. Table of physical properties of compounds of ions of the analytical groups. Index. Answers to problems.

Note (897) A standard college text. It was one of the first laboratory manuals to emphasize the illustration of the laws of chemical equilibrium and related phenomena rather than the learning of analytical techniques. Standard wet analytical procedures are covered in the second part, but the authors recognize that the student will have little need for them if he goes on to analytical work in industrial laboratories, and therefore they stress, even in this part of the book, the basic properties and reactions. The book was also a pioneer in the introduction of semi-micro methods in qualitative analyses. In this edition it has not been changed radically but changes include substantial expansions of several topics in the first part and revised and new review problems. The theoretical part of the volume is available separately under the title *Ionic equilibrium as applied to qualitative analysis*, revised edition, New York Henry Holt and Company 1947 322 p., $2.90.

KOLTHOFF, IZAAK MAURITS, AND V A. STENGER

Volumetric analysis. Volume II Titration methods acid-base, precipitation and complex formation reactions Second revised edition. New York Interscience Publishers, Inc. 1947 374 p illus. 23 cm $6.00 306

Contents: Apparatus and general principles: Calibration and use of volumetric apparatus. Practical principles of volumetric analysis. Acid-base reactions: Acidimetry and alkalimetry. Acid-base reactions. Acid base displacement titrations. Titrations involving hydrolytic precipitation or complex formation. Special methods of acidimetry and alkalimetry. Quantitative precipitation and complex-formation reactions: Argentometric titrations. Other precipitation methods. Formation of slightly dissociated or complex compounds—mercurimetry. Appendix. Author index. Subject index.

Note (903) Since publication of the first edition of the English translation in 1929, this work has become widely known as a manual of analytical laboratory methods on the graduate and professional levels. It presents a liberal selection of useful tests, discusses procedures and reagents in detail, and gives references to the pertinent literature. As indicated in the contents, the arrangement of methods is by the type of reaction involved in the titration rather than by the field of application. Oxidation-reduction reactions, which were formerly covered in volume II, will be the subject of a third volume. The text material has been extensively rewritten and augmented for this edition. American and English literature references have been revised, but World War II prevented the inclusion of foreign-language references after 1940.

McNAIR, JAMES BIRTLEY

The analysis of fermentation acids the qualitative and quantitative estimation of formic, acetic, propionic, butyric, and lactic acids in biological material such as foods, vegetable products, silage, honey, wine, alcohols vinegar esters sour milk, cheese, blood urine, and feces. Los Angeles Westernlore Press, 1947 290 p illus. 23 cm. $7.50 307

Contents: Part I, Extraction of acids from biological materials. Steam versus ether. Part II, Formic acid: Methods for the determination of formic acid. Methods for the determination of formic acid in various substances. Part III, Acetic acid. Methods for the determination of acetic acid. Methods for the determination of acetic acid in various substances. Part IV, Propionic acid: Methods for the determination of propionic acid. Part V Mixtures of acids: Estimation by distillation (except by Duclaux method). Estimation

by solubilities. Estimation by other methods. Part vi, Lactic acid. Methods for the determination of lactic acid. Methods for the determination of lactic acid in various substances. Part vii, Duclaux method. Explanation of method. Methods of calculation, apparatus, and technique. Use of method on various substances. Qualitative determinations. Bibliography. Indexes.

Note. This compilation provides a historical and critical survey of procedures in acid determination. A number of experiments are first outlined in an introductory chapter to show that ether extraction is superior to steam distillation in the separation of organic acids from bacteriological media. Following this, a chapter for each individual acid gives the procedures for its determination in pure solution and in certain substances. The method of each investigator is described and evaluated in chronological order by which arrangement the accepted procedure, usually the latest, is found near the end of the chapter. There is an extensive international bibliography.

Mitchell John Jr. and Donald Milton Smith

Aquametry application of the Karl Fischer reagent to quantitative analyses involving water New York Interscience Publishers Inc. 1948 444 p illus. 24 cm. (Chemical analysis series of monographs on analytical chemistry and its applications B. L. Clarke and I. M. Kolthoff editors. Vol. v) $8.00 308

Contents Part One, Specific quantitative determination of water by Karl Fischer reagent—reactions of inorganic compounds: Methods for determination of water. Titrimetric determination of water using Karl Fischer reagent. Nature of the Karl Fischer reagent. Titrimetric procedures for using Karl Fischer reagent. Determination of water in organic compounds. Determination of water in commercial organic materials. Determination of water in inorganic compounds. Reactions of Karl Fischer reagent with inorganic compounds. Part Two Organic reactions involving liberation or consumption of water—application of Karl Fischer reagent to quantitative determination of organic functional groups. Determination of alcoholic hydroxyl. Determination of organic carboxylic acids. Determination of acid anhydrides. Determination of carbonyl compounds. Determination of amines and nitriles. Determination of peroxides. Miscellaneous analytical procedures. Proposed further studies involving Karl Fischer reagent. Author index. Subject index.

Note Since its discovery in 1935 the Karl Fischer reagent has become highly useful in determinations of moisture content for many organic and inorganic compounds and reactions. The authors of this volume describe their own wide experience with this modern analytical reagent, and critically survey the rapidly increasing literature on the subject up to early 1947. For easy duplication in the laboratory all procedures involving the reagent are discussed in detail. Documentation is in the form of footnotes. The book is mainly for research chemists and graduate students.

Olson Axel Ragnar, and others

Introductory quantitative analysis by Axel R. Olson Edwin F Orlemann and Charles W Koch. Illustrations by Leonard W Tregillus. San Francisco W. H. Freeman and Company 1948 299 p illus 22 cm. (A series of chemistry texts Linus Pauling, editor) $3.25 309

Contents Introduction. Introductory laboratory techniques (determination of water in a hydrate). Fundamental calculations. Equilibrium and equilibrium constants. Gravimetric techniques and the control of solubility (determination of chloride). Gravimetric determination of sulfate, physical character and purity of precipitates, and the gravimetric determination of iron. Evaluation of analytical data. Volumetric apparatus. Introduction to volumetric principles (determination of chloride). Principles and analytical applications of acid base reactions (standardization of sodium hydroxide and hydrochloric acid, determinations of acid phthalate and carbonate-bicarbonate mixtures). Principles and applications of oxidation-reduction reactions (determination of iron, calcium, copper). Relation of this introduction to the general field of quantitative analysis. Appendices. Tables of logarithms. Index.

Note A brief, thoroughly modern textbook which was developed in a one-semester course at the University of California. The learning of fundamental principles and basic techniques is emphasized. Techniques are described carefully in the text proper and are shown in a series of clear illustrations. Only gravimetric and volumetric methods in inorganic analysis are covered.

Pierce Willis Conway, and Edward Lauth Haenisch

Quantitative analysis Third edition. New York John Wiley & Sons, Inc. 1948 520 p. illus. 24 cm. $3.75 310

Contents (abridged) Part i, Fundamentals: The analytical balance and its use. Precision, errors, and significant figures. Preparation of the sample for analysis. Part ii, Volumetric analysis: Methods and apparatus. Theory of neutralization reactions. Complex equilibria. Oxidation-reduction. Volumetric precipitation methods. Part iii, Gravimetric analysis: Methods and operations. Equilibria in precipitation reactions. Gravimetric analysis of simple mixtures. Part iv Special methods: Analysis by electrodeposition. Electrometric titrations. Use of analytical literature. Standard samples. Appendix Mathematical operations. Equilibrium constants. Preparation of indicator solutions. Index.

Note (914a) Innovations in the third edition of this standard textbook include the rewriting of practically the entire text including chapter review questions and problems, an increase in the number of problems by nearly fifty per cent, a new chapter on complex equilibrium, and expansion of the former chapter on theoretical aspects of precipitation.

Rosin Joseph

Reagent chemicals and standards with methods of assaying and testing them also the preparation and standardization of volumetric solutions and extensive tables of equivalents Second edition. New York D Van Nostrand Company Inc. 1946 542 p illus. 23 cm. $7.50 311

Contents. Explanatory notes. Solutions used as reagents. Standard solutions. The arsenic test. Reagents. Volumetric solutions. Preparation and standardization of volumetric solutions. Indicators for volumetric determinations. Equivalents of normal and tenth-normal solutions. Freezing point determination. Nitrogen determination. Sulfur determination by the Parr bomb method. Water determination with the Karl Fischer reagent. pH determination. Buffer mixtures. Indicators for pH determinations. Index.

Note (918) A standard reference book for analytical chemists. More than 430 substances that are important in chemical analysis are described. For each one, the properties and maximum permissible impurities are stated, and detailed procedures for assay and analysis for impurities are given. In comparison to the first edition published in 1937, the present edition contains many important changes which include the addition of new reagents and the substitution of new and better analytical procedures. The author is Chief Chemist of Merck & Co., Inc.

Sanderson Robert Thomas

Vacuum manipulation of volatile compounds a laboratory manual describing the application of high vacuum technique in experimental chemistry New York John Wiley & Sons Inc. 1948 162 p illus 22 cm $3.00 312

Contents Introduction to chemical high vacuum technique. Materials of construction and operation. Glass blowing. Producing high vacuum. Measuring pressure. Low temperatures. Valves. Introducing into and removing from vacuum system. Measuring volume. Measuring vapor pressure. Condensation traps and fractionation. Miscellaneous suggestions and methods. Practice in high vacuum technique. A general utility high vacuum apparatus. Future developments. Appendix. Author index. Subject index.

Note As the title indicates, this manual has been written to provide the chemical research worker with a practical knowledge of the fundamental principles and methods of high vacuum technique. It describes in detail the actual construction of a laboratory high vacuum system, and the procedures to be followed in carrying out typical quantitative analyses. Particular attention is given to the intricacies of handling minute quantities of material. The appendix includes a tabulation of the melting points, boiling points, and vapor pressures for 398 pure compounds.

SHRINER, RALPH LLOYD AND REYNOLD C FUSON

The systematic identification of organic compounds a laboratory manual. Third edition. New York John Wiley & Sons Inc., 1948 370 p. Illus. 22 cm. $4.00 313

Contents. Introduction. The identification of unknowns. Preliminary examination. The determination of physical properties. Qualitative analysis for the elements. The solubility classes. Application of classification tests. The preparation of derivatives. Tables of derivatives. The separation of mixtures. The interpretation of experimental data. Problems. Appendix. Index.

Note (920a) One of the better books of its kind. It is organized so as to aid the student in the laboratory identification of unknown compounds. The chapter on classification tests is exceptionally full; and in another chapter there are over twenty-five tables that give boiling points or melting points of derivatives. A convenient feature introduced in this edition is the inclusion of melting points or boiling points in the index. Other changes include the rewriting of certain parts and the addition of some classification tests and procedures for the preparation of derivatives.

SNELL, FOSTER DEE, AND CORNELIA T SNELL

Colorimetric methods of analysis including some turbidimetric and nephelometric methods. Volume I. Third edition. New York D Van Nostrand Company Inc., 1948 239 p. Illus. 23 cm. $4.50. 314

Contents: Volume I, Theory—Instruments—pH. Colorimetric methods. Theory. Comparison with series of liquid standards. Comparison with solid standards. Dilution and duplication methods. Balancing method. Artificial liquid standards. Spectrophotometry. Visual filter photometry. Photoelectric filter photometry. Photoelectric filter photometers. Filters. Nephelometry. Turbidimetry. Fluorometry. Accuracy. Calculations. Hydrogen-ion—general. Hydrogen-ion buffers and indicators. Hydrogen-ion—preparation of samples. Hydrogen-ion—methods of determination. Author index. Subject index.

Note. The rapid growth of the field of colorimetric analysis has necessitated an expansion of this standard work from two to three volumes. Volume I is devoted to discussion of a wide variety of instruments and the principles underlying their operation. A photograph of each instrument is reproduced, its use is described briefly, the address of the supplier is usually given, and there are references to papers with further discussion. The expanded treatment given to photoelectric equipment is particularly welcome. Nephelometry and fluorometry are discussed in very brief chapters. Several valuable reference tables are reproduced here. Volumes II and III of this edition will treat of inorganic and organic applications, respectively.

TALBOT HENRY PAUL

Talbot's quantitative chemical analysis, revised and rewritten by Leicester F Hamilton and Stephen G Simpson Ninth edition. New York The Macmillan Company 1946. 439 p. Illus. 22 cm. $4.00. 315

Contents: Part I, Introduction. General considerations. General directions for laboratory work. Common analytical operations. Computation rules. The analytical balance. Equilibrium constants. Part II, Volumetric analysis: General directions for volumetric work. Neutralization methods. Acidimetry and alkalimetry. Oxidation-reduction (redox) processes. Oxidation-reduction (redox) titrations. Permanganate process. Dichromate and ceric processes. Iodometry (Iodimetry). Precipitation methods. Complex formation methods. Potentiometric methods. Part III, Gravimetric analysis. General principles of gravimetric analysis. Analyses of soluble salts. Analysis of ores. Part IV Miscellaneous analysis: Analysis of limestone. Analysis of nonferrous alloys. Analysis of iron and steel. Appendix. Index.

Note: A standard text and laboratory manual that has been used in successive editions for more than fifty years. It is organized so that the student can acquire a full understanding of the chemical theory involved as he learns the details of laboratory techniques. Modernizations made in the ninth edition include revisions of most of the laboratory procedures, and expansion of the material on oxide potentials, mass-action equilibria, the character of precipitates and coprecipitation effects. Among the added analyses are those for the determination of nitrogen by the Kjeldahl method and the determination of sodium and potassium by the J L Smith method.

TRIEBOLD HOWARD OLTAS

Quantitative analysis with applications to agricultural and food products. New York D Van Nostrand Company Inc., 1946 331 p. Illus. 22 cm. $3.00. 316

Contents Part I, Fundamentals of quantitative analysis: Introduction to quantitative analysis. Part II, Gravimetric analysis: Operations of gravimetric analysis. The analytical balance, weights and weighing. Gravimetric determinations. Part III, Volumetric analysis: Volumetric methods, apparatus, and solutions. Neutralization reactions. Oxidation and reduction reactions. Volumetric precipitation methods. Part IV Analysis by physical chemical methods: Physical chemical methods. Part V General methods used in agricultural and food analysis General methods. Part VI, Analysis of agricultural products: Feedstuffs. Milk. Butter. Maple syrup. Soils. Fertilizers and limestone. Insecticides and fungicides. Part VII, Stoichiometry: Solution of problems. Problems. Subject index.

Note The analysis of food products from the farm and dairy and of materials found or used on farms, such as soils and fertilizers, is emphasized in this book. In addition to the familiar volumetric and gravimetric techniques, selected physico-chemical analytical methods as refractometry colorimetry saccharimetry, etc. are covered. Abundant laboratory exercises are included to insure development of the student's technical ability. Footnote references are throughout the book.

WELCHER, FRANK JOHNSON

Organic analytical reagents. New York D Van Nostrand Company Inc., 1947–48 4 v Illus. 24 cm. $8 00 each volume. 317

Contents: Volume I: The electronic theory of valence. Coordination compounds. Chelate compounds. Types of chelate rings. The effect of structure on solubility. Hydrocarbons. Substitution products of hydrocarbons. Alcohols. Phenols. Miscellaneous phenolic compounds. Amino phenols. Phenol sulfonic acids. 8-hydroxyquinoline and its derivatives. Azo derivatives of 8-hydroxyquinoline. Ethers. Aldehydes. Ketones. Index of names and synonyms of organic reagents. Index of the uses of organic reagents. Volume II: The organic acids. Halogen substituted acids. Hydroxy acids. Amino acids. Miscellaneous acids. Acyl halides. Acid anhydrides. Esters. The amines. Quaternary ammonium compounds. Index of names and synonyms of organic reagents. Index of the uses of organic reagents. Volume III: Part I, Heterocyclic nitrogen compounds. Pyridine and its derivatives. Quinoline and quinoline derivatives. Dipyridyl and related compounds. Pyrazolone derivatives. Miscellaneous heterocyclic nitrogen compounds. Part II, The oximes: The dioximes. Acyloin oximes. Hydroxyoximes. Monoximes of diketones. Isonitroso compounds. Nitroso phenols. Miscellaneous oximes. Cupferron and neocupferron. Nitroso amines. Part III, Acidic imino compounds: Rhodanine and its derivatives. Carbazides, thiocarbazides, and semicarbazides. Carbazones. Thiocarbazones. Miscellaneous imino compounds. Index of names and synonyms of organic reagents. Index of the uses of organic reagents. Volume IV Acidic nitro compounds. The organic acids. The dithiocarbamates. The xanthates. Miscellaneous sulfur compounds. Sulfonic acids. The arsonic acids. Selenious acids. The alkaloids. Dyestuffs compounds. Carbohydrates. Miscellaneous natural substances. Miscellaneous compounds. Lake-forming dyestuffs. Hydroxyanthraquinone dyes. Miscellaneous dyes. Dyes used in the detection of alkalis. Index of names and synonyms of organic reagents. Index of the uses of organic reagents.

Note Totaling 2,239 pages in four volumes, this major work is designed as a reference manual of all organic analytical reagents that have been described in the chemical literature published prior to January 1 1946. Methods of preparation and uses of the reagent compounds are explained in sufficient detail for laboratory needs, and in addition, citations are given to the original literature sources. Each volume contains an index of names and synonyms of organic reagents and an index of the uses of organic reagents. The latter feature brings together under the name of a substance, the names of all organic reagents that have been reported as usable for its detection.

WEST, PHILIP WILLIAM

Calculations of quantitative analysis. New York The Macmillan Company, 1948 162 p. Illus. 22 cm. $2 75 318

Contents: Introduction. Chemical factors and the fundamental calculations of gravimetric analysis. Fundamental calculations of

thrimetric analysis and solution strength. Calculations involving percentage, specific gravity percentage, molar normal, and other solutions. Oxidation-reduction. Miscellaneous calculations. Chemical equilibria and the law of mass action. Reliability of analytical results. Appendix. Index.

Note This college text is intended for undergraduate students taking courses in elementary quantitative analysis. While nothing new is added to the field, the exposition is simple and clear

WILLARD HOBART HURD, AND OTHERS

Instrumental methods of analysis by Hobart H. Willard Lynne L Merritt, Jr and John A Dean. New York D Van Nostrand Company Inc. 1948 247 p illus. 28 cm. Paper $4 00 319

Contents: Visual colorimeters. Fundamental laws of colorimetry Photoelectric colorimeters and fluorescence meters. Turbidimeters and nephelometers. Spectrophotometry and flame photometry Spectrography X-ray diffraction methods. Radioactivity The refractometer and interferometer. Thermal conductivity and other methods for the analysis of gases. Mass spectrometry The centrifuge. Determination of the pH of solution. Potentiometric titration methods. Conductometric titration methods. Electrolytic separation of metals. Polarography Amperometric titration methods. Appendix. Index.

Note In recent years instrumental methods of chemical analysis have superseded other analytical techniques in several fields of industry and have become dominant in certain types of laboratory research. Nevertheless there is not much information on them in the standard texts on analytical chemistry This work—the present edition of which the authors regard as preliminary and subject to early revision—is designed to provide broad introduction to the field. Each class of instrument is described as to purpose, method of operation advantages and disadvantages. Laboratory experiments involving the use of specific instrument are included in each chapter. Frequent references are made to related literature in which specific instruments and procedures are discussed more fully

ORGANIC CHEMISTRY

ADVANCES IN CARBOHYDRATE CHEMISTRY Volume 1 Edited by W W Pigman and M. L. Wolfrom. New York Academic Press Inc. 1945 374 p illus. 23 cm. $7.50 320

Contents. The Fischer cyanohydrin synthesis and the configurations of higher-carbon sugars and alcohols, by C. S. Hudson. The altrose group of substances, by N K. Richtmyer Carbohydrate orthoesters, by E. Pacsu. Thio- and seleno-sugars, by A. L. Raymond. The carbohydrate components of the cardiac glycosides, by R. C. Elderfield. Metabolism of the sugar alcohols and their derivatives, by C. J Carr and J. C. Krantz, Jr. The chemistry of the nucleic acids, by R. Stuart Tipson. The fractionation of starch, by Thomas J. Schoch. Preparation and properties of starch esters, by R. L. Whistler Cellulose esters of organic acids, by C. R. Fordyce. A discussion of methods of value in research on plant polyuronides, by E. Anderson and L. Sands.

—— Volume 2 Edited by W W Pigman and M. L. Wolfrom. New York Academic Press, Inc., 1946 323 p illus. 23 cm. $7.50 321

Contents: Melezitose and turanose, by C. S. Hudson. The chemistry of anhydro sugars, by S. Peat. Analogs of ascorbic acid, by F Smith Synthesis of hexitols and pentitols from unsaturated polyhydric alcohols, by R. Lespieau. The interrelation of carbohydrate and fat metabolism, by H. J Deuel, Jr and M. G. Morehouse. The chemistry of mucopolysaccharides and mucoproteins, by M. Stacey Bacterial polysaccharides, by T H. Evans and H. Hibbert. The chemistry of pectic materials, by E. L Hirst and J K N Jones. The polyfructosans and difructose anhydrides, by E. J. McDonald. Cellulose ethers of industrial significance, by J. F Haskins. Author index. Subject index.

—— Volume 3 Edited by W W Pigman and M. L. Wolfrom. New York Academic Press, Inc., 1948 424 p illus. 23 cm. $8.50 322

Contents. Historical aspects of Emil Fischer's fundamental conventions for writing stereo-formulas in plane, by C. S. Hudson. The structure and reactivity of the hydrazone and osazone derivatives of the sugars, by E. G. V Percival. The chemistry and configuration of the cyclitols, by H. G. Fletcher Jr Trityl ethers of carbohydrates, by B. Helferich. Glutose and the unfermentable reducing substances in cane molasses, by L. Sattler The halogen oxidation of simple carbohydrates, excluding the action of periodic acid, by J W Green. The molecular constitution of cellulose, by J. Compton. Isotopic tracers in the study of carbohydrate metabolism, by S. Gurin. Products of the enzymic degradation of starch and glycogen, by K. Myrbäck. The polysaccharides of mycobacterium tuberculosis, by M. Stacey and P W Kent. The chemistry of streptomycin, by R. U. Lemieux and M. L. Wolfrom. Author index. Subject index.

Note. The purpose of this series is to provide critical survey of significant recent developments. As the titles of the papers indicate, the term "carbohydrate chemistry" is interpreted broadly The papers are written by specialists and are intended for reading by persons with scientific or technical backgrounds. The editors strive to make the series international in scope hence the contributors are of several nationalities including, of course, United States of America and Canada. The bibliographical apparatus consists of footnote references, which are tied by numbers to statements in the text.

ADVANCES IN PROTEIN CHEMISTRY edited by M. L Anson and John T Edsall. Volume II. New York Academic Press, Inc., 1945 443 p illus 23 cm. $7 50 323

Contents Analytical chemistry of the proteins, by A. J. P Martin, and R. L. M. Synge. The microbiological assay of amino acids, by E. E. Snell. The amino acid composition of food proteins, by R. J. Block. The relationship of protein metabolism to antibody production and resistance to infection, by P R. Cannon. Terminal amino acids in peptides and proteins, by S. W Fox. The copper proteins, by C. R. Dawson and M. F Mallette. Mucoids and glycoproteins, by K. Meyer The reactions of formaldehyde with amino acids and proteins, by D French and J. T Edsall. Wheat gluten, by M. J. Blish. Protein denaturation and the properties of protein groups, by M. L. Anson. X-ray diffraction and protein structure, by I. Fankuchen. Author index. Subject index.

—— Volume III. New York Academic Press Inc. 1947 524 p. illus. 23 cm. $7.50. 324

Contents: Transamination and the integrative functions of the dicarboxylic acids in nitrogen metabolism, by A. E. Braunstein. Ferritin and apoferritin, by L. Michaelis. Adsorption analysis of amino acid mixtures, by A. Tiselius. Spread monolayers of protein, by H. B. Bull. Films of protein in biological processes, by A. Rothen. The chemical determination of proteins, by P L. Kirk. Reactions of native proteins with chemical reagents, by R. M. Herriott. The amino acid requirements of man, by A. A. Albanese. The use of protein and protein hydrolysates for intravenous alimentation, by R. Elman. The preparation and criteria of purity of the amino acids, by M S. Dunn and L. B. Rockland. The plasma proteins and their fractionation, by J. T Edsall. Author index. Subject index.

—— Volume IV New York Academic Press Inc., 1948 575 p illus. 23 cm. $8.50 325

Contents: Protein gels, by J D Ferry The interactions of proteins and synthetic detergents, by F W Putnam. Proteins of pathogenic bacteria, by A. M. Pappenheimer Jr. The plasma proteins in disease, by A. B. Gutman. Preparative electrophoresis and ionophoresis, by H. Svensson. Stereochemistry of amino acids, by A. Neuberger X-ray studies of amino acids and peptides, by R. B. Corey Heme proteins, by J Wyman, Jr. Author index. Subject index.

Note (909) A continuing series, each volume of which contains several short monographs on specific topics as indicated above. Each monograph is critical summary of the current knowledge and the international literature of its special topic. The accompanying lists of literature, to which the texts of the monographs are keyed, usually run to several hundred references.

AMERICAN PETROLEUM INSTITUTE. RESEARCH PROJECT 44

Selected values of properties of hydrocarbons prepared as part of the work of the American Petroleum Institute Research Project 44 by Frederick D Rossini, Kenneth S. Pitzer William J Taylor, Joan P Ebert, John E. Kilpatrick, Charles W Beckett, Mary G Williams and Helene G Werner

Washington D C. Government Printing Office, 1947 483 p 27 cm. (United States. National Bureau of Standards. Circular C461) $2 75 326

Contents: Introduction. Tables of fundamental constants, conversion factors, useful equations, and molecular weights. Tables of selected values of properties. Specific references for tables of properties. General list of references. Publications of the American Petroleum Institute Research Project 44

Note: An important reference work of fundamental chemical and physical data. It is based primarily on information available in the literature and in unpublished manuscripts, but these data have been critically evaluated, and the "best" values have been tabulated. Original calculations have been made where necessary All of the tables are internally consistent. The original sources of the basic data are cited. This book contains all of the numerical tables issued by the project up to May 31, 1947 New tables are issued monthly and are available from the American Petroleum Institute.

BREWSTER, RAY QUINCY

Organic chemistry New York Prentice-Hall, Inc., 1948. 840 p illus 24 cm. (Prentice-Hall chemistry series, Wendell M. Latimer editor) $7.35 327

Contents (abridged) Part I, Aliphatic compounds: The alkanes or paraffinic hydrocarbons. Unsaturated hydrocarbons. Halogen derivatives of hydrocarbons. Alcohols. Aldehydes and ketones. Monocarboxylic acids (fatty acids) Acid derivatives. Aliphatic amines. Cyanogen and its derivatives. Sulfur compounds. Polyhydric alcohols. Cis-trans isomerism and unsaturated acids. Optical isomerism, halogenated acids, and hydroxy acids. Amino acids and proteins. Carbohydrates. Part II, Aromatic compounds: Sulfonic acids. Aromatic nitro compounds. Aromatic amines. Diazo compounds. Aromatic alcohols and phenols. Aromatic aldehydes, ketones, and quinones. Polynuclear hydrocarbons. Dyes. Alicyclic compounds and terpenes. Heterocyclic compounds and alkaloids. Index.

Note: In this text for college students the principles of organic chemistry are explained in terms of the electronic and resonance theories Emphasis is placed on the mechanism of reactions and the descriptions of properties of various compounds are preceded by discussions of their electronic structure and formulas. A brief review of the fundamentals of atomic structure and the mechanism of chemical reactions is included, but the treatment as a whole requires a sound knowledge of general chemistry Each chapter concludes with review questions and problems. The author is Professor of Chemistry at the University of Kansas.

BURK, ROBERT EMMETT AND OLIVER GRUMMITT, editors

Advances in nuclear chemistry and theoretical organic chemistry New York Interscience Publishers Inc., 1945 165 p illus. 23 cm. (Frontiers in chemistry Volume III) $2.50 328

Contents: Isotopes and their applications in biochemistry by Albert E. Kamen. Applications of isotopes in catalytic reactions at surfaces, by Hugh S. Taylor. Techniques in nuclear physics, by H. R. Crane. Resonance and organic chemistry by Leslie G. S. Brooker. The hydrogen bond and its significance to chemistry by W H. Rodebush. Subject index.

Note: A collection of lectures originally presented at Western Reserve University Some of the papers have been considerably revised and expanded for publication and each is accompanied by suitable bibliography As in earlier volumes of this annual series, portrait and short biography of each author are included. The general purpose is to acquaint graduate students and scientists with the most recent advances in chemistry

CONANT JAMES BRYANT, AND ALBERT HAROLD BLATT

The chemistry of organic compounds a year's course in organic chemistry Third edition. New York The Macmillan Company 1947 655 p. illus. 24 cm. $5.25 329

Contents: Foreword. The alcohols. Alkyl halides and ethers. Saturated or paraffin hydrocarbons. Unsaturated hydrocarbons. Organic acids. Gasoline and rubber Industrial products from petroleum. Aldehydes and ketones. The polyhalogen compounds: determination of structure and synthesis of simple compounds. Important industrial syntheses. Derivatives of ammonia: amides, nitriles, amines. Polyhydric alcohols fats and oils. Dibasic acids: polymerization. Hydroxy acids, aldehydes, and ketones. Optical isomerism. Acetoacetic ester and malonic ester The carbohydrates. Unsaturated alcohols, acids, and carbonyl compounds. Derivatives of carbonic acid. Compounds containing sulfur The amino acids and proteins. Certain biochemical processes. Benzene and the alkylbenzenes. Aryl halides, sulfonic acids, and phenols. Aromatic nitro compounds, amines, diazonium salts, and azo dyes. Diamines, polyhydroxy compounds, and aminophenols. Aromatic aldehydes and ketones. Aromatic acids: phthaleins; resins and plastics. Aromatic carbinols and aryl derivatives of aliphatic hydrocarbons: triphenylmethane dyes. Naphthalene, anthracene, and phenanthrene. Alicyclic compounds. Natural products containing alicyclic rings: terpenes, sterols, sex hormones. Heterocyclic compounds. Natural and synthetic drugs. Index.

Note (1945) Those familiar with the literature of organic chemistry know this work as one of the leading American textbooks for first college courses. It is less inclusive than Fieser and Fieser' *Organic chemistry* Boston Heath, 1944 but its comparative brevity is sometimes an advantage not only in formal courses but also in library use. The present edition has been extensively rewritten, and new material drawn from industrial chemistry has been added. General readers who wish to test their interest in the book are advised to read the account of the utilization of carbon dioxide by plants and animals on pages 376–381.

EGLOFF GUSTAV

Physical constants of hydrocarbons. Vol. III–IV New York Reinhold Publishing Corporation 1946–47 illus. 23 cm. (American Chemical Society monograph series) Vol. III $12.00 vol. IV $13.50 330

Contents (abridged) Volume III: Introduction. Benzene and its aliphatic derivatives. Benzene with alicyclic substitutions. Biphenyl and its aliphatic derivatives. Two phenyl substitutions on aliphatics. Biphenyl with alicyclic substitutions. Terphenyls and their aliphatic derivatives. Three phenyl or one phenyl and one biphenylyl substitutions on aliphatics. Terphenyls with alicyclic substitutions. Quaterphenyls and their aliphatic derivatives. Quinquephenyls and their aliphatic derivatives. Sexiphenyls and their aliphatic derivatives. Six phenyl substitutions on alicyclics. Compounds containing seven phenyl groups. Compounds containing eight phenyl groups. Compounds containing nine phenyl groups. Compounds containing ten phenyl groups. Higher phenyl compounds. Volume IV: Benzocyclenes C_nH_{2n-x}. Polynuclear aromatics of empirical formula C_nH_{2n-10} to C_nH_{2n-x}

Note (1947) Based on search of the world's published and unpublished chemical literature, this reference work provides tabulations of the physical constants of hydrocarbons. The information typically given for compounds in Volume III includes the name and its important variations, diagram of the molecular structure, and values for the melting point, boiling point, specific gravity and refractive indexes. Certain other constants such as critical temperature, critical pressure, and sublimation point are given less frequently Since the recorded physical data on polymolecular aromatic hydrocarbons is limited in extent, Volume IV supplies little information other than the formula diagram, melting point, and boiling point for these compounds. Sources of the data are cited, and the citations constitute extensive lists of the pertinent literature.

EGLOFF, GUSTAVE, AND GEORGE HULLA

Alkylation of alkanes. Volume I Patents on alkylation of alkanes. New York Reinhold Publishing Corporation 1948 1138 p. illus. 23 cm. (American Chemical Society Monograph series) $20.00 331

Contents: Introduction. Catalytic alkylation of alkanes. Thermal alkylation of alkanes. Combination processes. Miscellaneous processes. Selective dealkylation of alkanes. Index of patents.

Note: The alkylation of alkanes, chemical reaction discovered in 1932 by Vladimir N Ipatieff and Herman Pines, has turned out to have very important practical applications, especially in the petroleum industry A voluminous literature has developed around it, and the purpose of this three-volume set—of which the present volume is the only one yet published—is to present an organized digest of this literature for the convenience of organic chemists. Volumes II and III will deal with periodical articles, reports, and other literature. In the present volume abstracts that run from paragraph or two to several pages are given of all the listed patents.

GROGGINS, PHILIP HERKIMER, editor in-chief

Unit processes in organic synthesis Third edition New York McGraw Hill Book Company Inc., 1947 931 p illus. 23 cm. (Chemical engineering series) $7.50 332

Contents Nitration. Amination by reduction. Diazotization. Halogenation. Sulfonation. Amination by ammonolysis. Oxidation. Hydrogenation. Alkylation. Esterification. Hydrolysis. The Friedel-Crafts reaction. Polymerization. Appendixes. Author index. Subject index.

Note (934) This book is well known as manual of chemical engineering techniques in manufacturing processes that involve organic syntheses. It covers basic principles, operating conditions and factors, plant equipment, and process flow sheets. Compared to the second edition (1938) the chapter on polymerization has been completely revised, and the sections on amination by ammonolysis and the Friedel-Crafts reaction have been considerably expanded. New material has been added throughout, but several chapters, notably those dealing with oxidation and esterification, have been altered very little. There are numerous additions to the bibliographical foot notes, and an entirely new feature is an appendix showing by-products and physical properties of number of hydrocarbons.

HUDSON CLAUDE SILBERT

The collected papers of C. S Hudson. Edited by Raymond M Hann and Nelson K. Richtmyer New York Academic Press Inc. Publishers, 1946 1948 illus. 2 v $30 00 333

Contents (abridged) Volume I, Section The forms of milk sugar. Physical chemistry of solutions. Mutarotation of sugars. Section Enzymes—studies on invertase, amylases, and emulsin. Section III Preparation of sugars. Section IV Rules of isorotation; Acetyl derivatives of sugars and glycosides. Section VI Lactones, phenylhydrazides, amides, and benzimidazole rules Volume II, Section VI Ketoses. Section VII Syntheses of higher-carbon sugars and their derivatives. Section VIII Periodate oxidations in the sugar group. Section IX Neolactose celtrobiose, and d-altrose. Section X Anhydro sugars and alcohols. Section XI Isopropylidene, benzylidene, and methylene derivatives of the polyhydric alcohols. Section XII Miscellaneous papers. Appendix. Author index by year and paper number Index to sources of publication. Subject index. Errata to Volume

Note One feature of the celebration of the sixty-fifth birthday of Dr. C. S. Hudson by the Division of Sugar Chemistry and Technology American Chemical Society in 1946 was the arranging for the publication of this collection. Two hundred and forty-seven papers representing the author' published contributions through June, 1945 are reprinted in the two volumes. As the section titles indicate, most of them deal with the chemistry of sugars, particularly the rarer sugars, and with other carbohydrate substances. A seventeen-page autobiographical sketch appears as foreword to Volume

HUNTRESS ERNEST HAMLIN

The preparation properties chemical behavior and identification of organic chlorine compounds tables of data on selected compounds of Order III. New York John Wiley & Sons, Inc., 1948 1443 p. 23 cm. $27.50 334

Note. An important reference book that will serve as companion volume to the author's *Identification of pure organic compounds* (Wiley 1941) Where the earlier work dealt with compounds composed of combinations of hydrogen, nitrogen, and oxygen, this volume provides data for compounds made up of combinations of carbon, chlorine, hydrogen and oxygen. The information given for each compound listed includes its name, structural formula, empirical formula, Beilstein reference, melting point, boiling point, density refractive index, methods of preparation, chemical behavior preliminary tests, derivatives, and bibliography The book is based on search of chemical literature and patents through 1945 but important references for the years 1946–47 are included in supplementary pages. Compounds are indexed by empirical formulas, chemical types, and by names; and empirical formulas are indexed by molecular weight and by percentage chlorine content.

KANAGY JOSEPH RAYMOND

Chemistry of collagen. Washington D C. Government Printing Office, 1947 26 p illus. 23 cm. (United States. National Bureau of Standards. Circular C458) Paper $0.10 335

Contents: Introduction. Shrinkage temperature of collagen. Formation of gelatin and glue. Swelling of collagen and gelatin. Structure of collagen. Conclusion. References.

Note A general outline of the physical and chemical properties of collagen an industrial protein of importance. It was prepared for the large number of chemists employed in industries where collagen or its transition product, glue, is processed. The bibliography lists forty-six references to collagen and protein chemistry

KOMAREWSKY, VASILI ILYICH AND OTHERS

Catalytic reactions, by V I. Komarewsky and C. H. Riesz. Photochemical reactions by W Albert Noyes Jr, and V Boekelheide. Electrolytic reactions, by Sherlock Swann, Jr New York Interscience Publishers, Inc., 1948 219 p. illus. 23 cm. (Technique of organic chemistry Arnold Weissberger editor Vol. II) $5.00 336

Note: As in other volumes of the series, the purpose is to describe special techniques and instruments that are available for laboratory work in organic chemistry The treatment is on professional level. References are given to the pertinent literature. The paper on catalysis is thoroughly illustrated with drawings and photographs, most of which show special equipment designed for high pressures.

LOWY ALEXANDER AND BENJAMIN HARROW

An introduction to organic chemistry revised by Benjamin Harrow and Percy M Apfelbaum. Sixth edition. New York John Wiley & Sons, Inc. 1945 454 p illus. 22 cm $3 50 337

Contents (abridged) Aliphatic series: Saturated hydrocarbons. Unsaturated hydrocarbons. Halogen derivatives of hydrocarbons. Alcohols. Ethers. Aldehydes and ketones. Carboxylic acids. Fats and oils, waxes, and some lipids. Acid anhydrides, acyl halides, and acid amides Amino acids and proteins. Nucleoproteins, purines, uric acid, and pyrimidines. Carbohydrates and related compounds. Sulfur phosphorus, arsenic, and organometallic compounds. Aromatic series. Aromatic hydrocarbons. Aromatic amines; diazo and azo compounds. Aromatic alcohols, phenols, and ethers. Aromatic acids and their derivatives. Naphthalene, anthracene, and their derivatives. Heterocyclic compounds. Synthetic plastics and synthetic rubbers. Dyes and stains. Alkaloids. Plant and animal pigments. Enzymes, vitamins, hormones. Nomenclature of organic compounds. Appendix: Glossary Reference books. Index

Note (937) A long-established text intended principally for college students who are preparing themselves for work in medicine, dentistry pharmacy or the biological sciences. The present edition contains fifty more pages, more extended treatment of the electronic concept of valency, and the inclusion of discussions on topics such as resonance, alicyclic ring structure, and high polymers. The chapter on terpenes has been rewritten and the list of reference books modernized.

McELVAIN SAMUEL MARION

The characterization of organic compounds. New York The Macmillan Company 1945 282 p. illus. 22 cm. $4 20 338

Contents. Outline of procedure for the characterization of organic compounds. Part A—Determination of physical constants Part B—Qualitative analysis for nitrogen, sulfur and halogens. The solubilities of organic compounds. The class reactions. Laboratory experiments with the class reactions. Separations of mixtures of organic compounds. The selection and preparation of derivatives. Ap-

pendix A—List of experiments. Appendix B—List of compounds and reagents required for experiments. Index.

Note. A laboratory manual designed to teach practical procedures for the identification of organic compounds. It is intended for use in courses offered to seniors and postgraduate students specializing in chemistry but certain elementary basic procedures are reviewed in the preliminary chapters. Sixty experiments are described. A feature of the book is the inclusion of data on the boiling points and other properties of a considerable number of organic compounds in order to enable the student to spend time in the laboratory that would otherwise have to be spent in searching the literature.

MARKLEY, KLARE STEPHEN

Fatty acids their chemistry and physical properties New York Interscience Publishers, Inc., 1947 688 p illus. 23 cm. $10.00 339

Contents: Nature and history of fats and waxes: Historical and general. Classification and structure of the fatty acids. Classification and nomenclature. Isomerism. Physical properties of the fatty acids. Crystal properties. Spectral properties. Thermal properties. Solubility of fatty acids and solution properties. Properties of the fatty acids in the liquid state. Chemical reactions of the fatty acids. Salts of fatty acids. Esterification and interesterification. Alkylation and alkenylation. Pyrolysis. Halogenation. Hydrogenation and hydrogenolysis. Oxidation and hydroxylation. Oxidation by atmospheric oxygen (autoxidation). Biological oxidation. Nitrogen derivatives of aliphatic acids. Sulfur derivatives of the fatty acids. Synthesis of fatty acids: In vitro synthesis of fatty acids. Biosynthesis of fatty acids. Isolation and identification of fatty acids: Separation of fatty acids. Identification of individual fatty acids. Author index. Subject index.

Note. This volume provides a comprehensive survey of present-day knowledge regarding the chemical reactions and physical properties of fatty acids. Based on a review of the literature of the subject, it brings together in one volume a great amount of technical information and data which will be of value to chemists, technologists, and others interested in the products and by-products of fatty acids. Although the lower members of the fatty acid series are discussed, the emphasis is placed on the long chain fatty acids. Also, because of the large amount of space that would be required for it, a complete treatment of glyceride esters and natural fats is not given. The numerous footnote references and an author index constitute an extensive bibliography of the subject.

MIGRDICHIAN, VARTKES

The chemistry of organic cyanogen compounds. New York Reinhold Publishing Corporation, 1947 460 p illus. 23 cm. (American Chemical Society monograph series) $12.00 340

Contents: General introduction. Nitriles, their formation and properties. Hydrolysis of hydrocyanic acid and nitriles. Action of strong mineral acids on nitriles. Aminolysis of nitriles. Simultaneous action of alcohols and acids on nitriles. Reaction of nitriles with halogens and other negative elements: reactions of cyanogen halides and cyanamides. Replacement of halogen or other acid residues by the nitrile group: other reactions involving metallic cyanides. Reduction of nitriles. Reaction of hydrocyanic acid and alkali cyanides with aldehydes and ketones: reactions of cyanohydrins. Aminonitriles derived from aldehydes and ketones. Reaction of unsaturated compounds with hydrocyanic acid and alkali cyanides. Gattermann's synthesis. Houben-Hoesch synthesis. Reaction of Grignard reagents with nitriles. Condensation reactions involving active methylenic groups: other condensations. Knoevenagel condensation. Polymerization of nitriles. Reactions of cyanates, thiocyanates and isocyanides. Author index. Subject index.

Note. Nitriles, or organic cyanides, are a varied and important group of nitrogen-bearing carbon compounds. This monograph is a comprehensive survey of their chemistry, including the chief methods of synthesis, their properties, and the products of reactions in which they are employed. Specific directions are given for the laboratory preparation of selected representative compounds, and methods of preparation are indicated for most of the compounds described. The work follows the general pattern of the series to the extent that it is based on a comprehensive literature survey. Extensive, numbered lists of references are appended to each chapter and statements in the text are keyed to them. However, historical information has been omitted except insofar as the history of specific compounds or reactions can be traced through the literature references. The work is valuable as a reference book to advanced students and graduate chemists.

MORTON, AVERY ADRIAN

The chemistry of heterocyclic compounds. New York McGraw Hill Book Company Inc., 1946 549 p illus. 23 cm. (International chemical series Louis P Hammett, consulting editor) $6.00 341

Contents: The furan compounds. Condensed furan systems. Thiophene and condensed thiophene systems. Pyrroles. Di- and poly-pyrryl compounds. Porphyrins and phthalocyanins. Condensed pyrrole system. Pyrans, pyrones, and related compounds. The pyridine group. Piperidine and related compounds. The quinoline compounds. Isoquinolines. Acridines and other condensed compounds. Azoles, azolones, and related systems. The azines and related compounds. Index.

Note. A college textbook for students who have had an introductory course in organic chemistry. Problems are included and there are numerous references to the literature of the subject. Because there are few collections of material on heterocyclic compounds in spite of their importance, the book should be of some use as a reference book. The author is Professor of Organic Chemistry at the Massachusetts Institute of Technology

MORTON AVERY ADRIAN

Levulinic acid as a source of heterocyclic compounds New York Sugar Research Foundation, Inc. 1947 28 p 23 cm. (Scientific report series. No. 8) Paper Gratis. 342

Contents: Reactive systems in levulinic acid. The keto-acid combination and related combinations. The keto-methylene or keto-methyl system. The halogeno-keto and related systems. The acid-chloride, ester or equivalent compound. Conclusion. Bibliography. Author index.

Note. The heterocyclic group of organic compounds includes many important dyes, drugs, insecticides, and fungicides. This monograph reviews briefly various methods which have been developed for the synthesis of these compounds from levulinic acid, and indicates the wide range of possibilities which exist for the synthesis of additional compounds. The author is Professor of Organic Chemistry at the Massachusetts Institute of Technology

MULDOON, HUGH CORNELIUS

Organic chemistry Third edition. Philadelphia The Blakiston Company 1948 648 p. illus. 24 cm $5.50 343

Contents (abridged): Introduction. Analysis—formulas—classification. Chain compounds. Unsaturated aliphatic hydrocarbons. Alkadienes. Alkyl halides. Aliphatic polyhalogen compounds. Monohydric alcohols. Unsaturated alcohols. Ethers. Monocarboxylic acids. Polycarboxylic acids. Esters. Lipids. Aliphatic nitrogen compounds. Amino acids—proteins. Carbohydrates. Aromatic hydrocarbons. Benzene series. Aromatic arsenicals, antimonials, and mercurials. Polynuclear compounds. Heterocyclic compounds. Terpenes and related compounds. Alkaloids—medicinal glycosides. Enzymes—antibiotics. Steroids—hormones—natural pigments—vitamins. Appendix. Index.

Note. (1938) An established textbook for use in first courses in the subject. It is slanted somewhat for students preparing for the study of medicine; for example, there is more space given to chemicals used in medicine and pharmacy than is usually the case in introductory texts. This edition has been considerably revised and rearranged, and new material has been added to such topics as antibiotics and hormones.

NIEUWLAND JULIUS ARTHUR, AND RICHARD R. VOGT

The chemistry of acetylene. New York Reinhold Publishing Corporation, 1945 219 p illus. 23 cm. (American Chemical Society monograph series) $4.00 344

Contents. The physical properties, preparation and purification of acetylene. Metallo-derivatives of acetylene. The substitution of non-metal atoms or radicals for the hydrogen of acetylene. The addition of non-metallic elements and compounds to acetylene. The polymerization of acetylene and condensation with carbon compounds. Author index. Subject index.

Note. This short but useful work deals with the preparation, properties and reactions of acetylene. The chemistry of compounds

derived from acetylene are mentioned only incidentally; and brief treatment is given also to the manufacture of calcium carbides and the use of acetylene as an industrial raw material. The textual statements are concise but adequate and are keyed to very extensive lists of the literature, including patents, published through about 1944.

ORGANIC REACTIONS Volume III. Roger Adams, editor in-chief New York John Wiley & Sons, Inc. 1946 460 p illus. 24 cm. $6 00 345

Contents. The alkylation of aromatic compounds by the Friedel-Crafts method, by Charles C. Price. The Willgerodt reaction, by Marvin Carmack and M. A. Spielman. Preparation of ketenes and ketene dimers, by W. E. Hanford and John C. Sauer. Direct sulfonation of aromatic hydrocarbons and their halogen derivatives, by C. M. Suter and Arthur W. Weston. Azlactones, by H. E. Carter. Substitution and addition reactions of thiocyanogen, by John L. Wood. The Hofmann reaction, by Everett S. Wallis and John F. Lane. The Schmidt reaction by Hans Wolff. The Curtius reaction, by Peter A. S. Smith. Index.

—— Volume IV Roger Adams editor in-chief New York John Wiley & Sons Inc., 1948 428 p illus. 24 cm. $6 00 346

Contents: The Diels-Alder reaction with maleic anhydride, by M. C. Kloetzel. The Diels-Alder reaction. Ethylenic and acetylenic dienophiles, by H. L. Holmes. The preparation of amines by reductive alkylation by W. S. Emerson. The acyloins, by S. M. McElvain. The synthesis of benzoins, by W. S. Ide and J. S. Buck. Synthesis of benzoquinones by oxidation, by J. Cason. The Rosenmund reduction of acid chlorides to aldehydes, by E. Mosettig and R. Mozingo. The Wolff-Kishner reduction, by D. Todd. Index.

Note Two additional volumes in this valuable series, the ultimate aim of which is to present surveys of all the useful reactions in organic chemistry. Each paper is written by an outstanding authority and provides relatively full statement of the nature of the reaction, its uses and limitations, and laboratory procedures and conditions. Frequently extensive tables of data on the properties of derivatives are included. References are made to the related literature.

ORGANIC SYNTHESES an annual publication of satisfactory methods for the preparation of organic chemicals. Werner E. Bachmann, editor in-chief Volume 25 New York John Wiley and Sons Inc., 1945 120 p illus. 24 cm. $2 00 347

Contents: Acrolein acetal and β-ethoxypropionaldehyde acetal. 2-amino-4-nitrophenol. Benzoylacetanilide. o-n-butoxynitrobenzene. n-butylbenzene. 1-n-butylpyrrolidine. β-carbomethoxypropionyl chloride. 2-chlorocyclohexanone. α-cyclohexylphenylacetonitrile. Diazomethane. 3,5-[illegible] acid. 2 4-dimethylthiazole. Dithizone. Ethyl benzalmalonate. Ethyl (1-ethylpropenyl)-methylcyanoacetate. Ethyl (1-ethylpropylidene)-cyanoacetate. o-eugenol. Furylacrylic acid. β-d glucose-1,2 4 6-tetraacetate. m-hydroxybenzaldehyde. Isobutyramide. Isobutyronitrile. Malononitrile. [illegible] acid. Methyl ω-cyanopelargonate. Methyl sebacamate. Naphthoresorcinol. 2-nitro-4-methoxyaniline. Nitrosobenzene. 4-penten-1-ol. p-phenylazobenzoic acid. p-phenylazobenzoyl chloride. β-phenylethyldimethylamine. Phenylpropargyl aldehyde. Sebaconitrile and ω-cyanopelargonic acid.

—— An annual publication of satisfactory methods for the preparation of organic chemicals. Homer Adkins editor-in-chief Volume 26 New York John Wiley & Sons Inc. 1946 124 p illus. 24 cm. $2.25 348

Contents. Acid anhydrides. Allyl lactate. Aminoguanidine bicarbonate. 3-amino-1,2 4-triazole. Benzyl chloromethyl ketone. 2-bromopyridine. n-butyl acrylate. Di-(p-chlorophenyl)-acetic acid. 2,5-dihydroxy-p-benzenediacetic acid. 6 7-dimethoxy-3 4-dihydro-2-naphthoic acid. Ethyl n-butylcyanoacetate. Ethylene thiourea. d-glucosamine hydrochloride. 2-isopropylaminoethanol. Julolidine. α-ketoglutaric acid. Lepidine. 2-methoxydiphenyl ether. Methyl 5-bromovalerate. Methylsuccinic acid. Muconic acid. p-nitrophenylarsonic acid. [illegible] Palladium catalysts. 1,5-pentanediol. Pyocyanine. Pyrogallol 1-monomethyl ether. Salicyl-o-toluide. Terephthalic acid. o-tolualdehyde.

—— An annual publication of satisfactory methods for the preparation of organic chemicals R. L. Shriner editor in-chief Volume 27 New York John Wiley & Sons, Inc., 1947 121 p. illus. 24 cm. $2.25 349

Contents: β-alanine. β-aminopropionitrile and bis-(β-cyanoethyl)-amine. Benzalacetone dibromide. Biallyl. α-bromobenzalacetone. tert.-butylamine. Carboxymethoxylamine hemihydrochloride. Decamethylenediamine. Diethylaminoacetonitrile. Dihydroresorcinol. 3,5-dimethyl-4-carbethoxy-2-cyclohexen-1-one and 3,5-dimethyl-2-cyclohexen-1-one. 1,5-dimethyl-2-pyrrolidone. 3,3-diphenylindanone (3,3-diphenyl-1-indanone) 2 4-diphenylpyrrole. Ethyl isopropylacetoacetate. 4-ethylpyridine. Glycolonitrile. 5-hydroxypentanal. Isatoic anhydride. 6-methoxy-8-nitroquinoline. 1-methyl-2-imino-β-naphthothiazoline. N-methyl-1-naphthylcyanamide. 1-methyl-1-(1-naphthyl)-2-thiourea. Mucobromic acid. m-nitrodimethylaniline. 3-penten-2-ol. γ-n-propylbutyrolactone and β-(tetrahydrofuryl)-propionic acid. Pseudothiohydantoin. Rhodanine. Stearolic acid. Tetraiodophthalic anhydride. m-thiocresol. tiglic acid. p-toluic acid. [illegible] acid. 1,3,5-triacetylbenzene.

—— An annual publication of satisfactory methods for the preparation of organic chemicals H. R. Snyder, editor in-chief Volume 28 New York John Wiley & Sons, Inc., 1948 121 p. illus. 24 cm. $2.50 350

Contents: 2-acetothienone. 2-acetylfluorene. 9-acetylphenanthrene. 2-allylcyclohexanone. o-aminobenzaldehyde. p-aminophenyl disulfide. Benzoyl disulfide. 9-bromophenanthrene. 4-bromo-o-xylene. 3-carbethoxycoumarin. p-chloroacetylacetanilide. m-chlorophenylmethylcarbinol. m-chlorostyrene. 9-cyanophenanthrene. trans-1,2-cyclohexanediol. 4,7-dichloroquinoline. 2,5-dihydroxyacetophenone. Dibenzoylmethane. 3,4-dimethylaniline. 2 4-dimethylquinoline. 1 4-dinitronaphthalene. Diphenylacetonitrile. Ethyl azodicarboxylate. Ethyl ethoxymethylenemalonate. Fluorenone-2-carboxylic acid. Hexamethylene chlorohydrin. Hydroquinone diacetate. 2-hydroxycinchoninic acid. dl-isopropylideneglycerol. Methyl 4-keto-7-methyloctanoate. 4-nitro-1-naphthylamine. p-nitrophenyl sulfide. Phenanthrene-9-aldehyde. 1-phenyl-3-amino-5-pyrazolone. α-phenylthiourea. 2 4,7-trinitrofluorenone. Vinyl chloroacetate. Subject index for volumes 20–28.

Note An internationally-known series which has been published since 1921 For each substance practical laboratory methods are given, the apparatus is described and, if necessary illustrated; notes are given on special points, and other published methods for synthesis of the same compound are mentioned and references are made to their original publication. Before acceptance for publication each synthesis is carried out in at least two laboratories with which the submitter is not associated.

PIGMAN WILLIAM WARD AND RUDOLPH MAXIMILIAN GOEPP JR.

Chemistry of the carbohydrates New York Academic Press, Inc., 1948 748 p. illus. 23 cm. $10.80 351

Contents (abridged) Introduction—development of carbohydrate chemistry—general chemistry—nomenclature and definitions. Structure and stereochemistry of the monosaccharides. Occurrence, properties, synthesis and analyses of the monosaccharides—naturally occurring monosaccharides—synthetic sugars—the identification and the quantitative determination of carbohydrates. Esters. Glycosides, full acetals and thioacetals. The polyols—acyclic polyols(glycitols)—the inositols and related compounds. Acids and oxidation products of carbohydrates. Ethers, anhydrides and unsaturated derivatives. Nitrogenous derivatives. Oligosaccharides. Naturally occurring glycosides and glycosidases. Classification and determination of structure of the polysaccharides. Cellulose. The starches and starch substances. Polyuronides, hemicelluloses, plant gums, microbial polysaccharides. Author index. Subject index.

Note A general survey of broad field of chemistry. It is monographic in style and organization and is based on wide but not exhaustive survey of the literature. Statements in the text are keyed to the numerous bibliographic footnotes. The work is written for advanced students who are beginning intensive study of the carbohydrates and for graduate chemists who are not specialists in carbohydrate chemistry but need general knowledge of the field and, on occasion, specific information about the chemistry of special carbohydrate group or particular reaction.

RALSTON, ANDERSON WHEELER

Fatty acids and their derivatives. New York John Wiley & Sons Inc., 1948 986 p. illus. 22 cm. $10.00 352

Contents: The saturated fatty acids. The ethylenic fatty acids. The acetylenic acids, the hydroxy acids, the keto acids, the cyclic acids, and the dicarboxylic acids. The preparation of the fatty acids from the naturally occurring fats. The structure and physical properties of the fatty acids. Reactions of fatty acids not involving the carboxyl group. The fatty acid esters. The nitrogen-containing derivatives of the fatty acids. The alcohols and their esters, the ethers, mercaptans, sulfides, sulfonates, and related compounds. The fatty acid anhydrides, acid chlorides, aldehydes, ketones, and related compounds. The aliphatic hydrocarbons and metallic soaps. Addendum. Index.

Note: The author of this volume, Assistant Director of Research at Armour and Company has written widely in periodical literature regarding his investigations into the properties of the fatty acids. In this work he provides a comprehensive discussion of present-day knowledge concerning the occurrence, synthesis, physical and chemical properties, and uses of these acids and their derivatives. The purpose and nature of the book are similar to Markley's *Fatty acids* (see above) but the scope is somewhat broader due to the inclusion of more material on derivatives. Extensive lists of references key-numbered to the text are given at the end of each chapter

ROCHOW, EUGENE GEORGE

An introduction to the chemistry of the silicones. New York John Wiley & Sons, Inc. 1946 137 p illus. 23 cm. $2 75 353

Contents: The simple covalent compounds of silicon. The organosilicon monomers. Types of organosilicon polymers. Properties of the specific silicone polymers. Water-repellent films from organosilicon materials. Technical aspects of silicones. Analytical methods. Glossary. Index.

Note: A general survey of the chemistry and uses of the organic compounds of silicon. It is written for industrialists, engineers, and other persons with technical backgrounds, but is not intended for specialists in silicone chemistry. The pertinent literature including patents is cited. The author is on the staff of the General Electric Company's Research Laboratory

SCHNEIDER, FRANK

Qualitative organic microanalysis. New York John Wiley & Sons Inc., 1946 218 p illus. 22 cm. $3 50 354

Contents: Introduction. General methods. Preparation of the sample. Elementary analysis. Determination of physical constants. Determination of solubility. Compounds of order I. Compounds of order II. Compounds of the higher orders. List of apparatus. Index.

Note: Although considerable work has been done on the identification of organic compounds by micro methods, this laboratory manual is one of the first books to contain a complete and unified scheme for such analysis. All of the fundamental micro-techniques are described in detail, and as an aid to further study a large number of references are cited. Intended primarily for use in college courses in organic chemistry the book is also of value to practicing analysts. The author is an Assistant Professor of Chemistry at Queens College, New York.

STEACIE EDGAR WILLIAM RICHARD

Atomic and free radical reactions the kinetics of gas-phase reactions involving atoms and organic radicals. New York Reinhold Publishing Corporation, 1946 548 p illus. 24 cm. (American Chemical Society monograph series) $8 00 355

Contents: Experimental methods. Free radicals in thermal decomposition reactions. Free radical mechanisms in polymerization reactions. Free radical mechanisms in photochemical reactions. Systems containing carbon and hydrogen only. Systems containing oxygen. Systems containing nitrogen. Systems containing chlorine (and fluorine). Systems containing bromine. Systems containing iodine. Systems containing mercury. Systems containing other metals. Systems containing sulfur. Appendix: Reaction index and table of activation energies. Author index. Subject index.

Note: A monographic survey based, as is usual in this series, on comprehensive review of the literature. It assembles and interprets the data on the elementary reactions of organic substances in the gaseous state that have hitherto been widely scattered. The long chapter on experimental methods describes the techniques that have been devised for determining the reaction rates of atoms and free radicals. An abridged version in which most of material in the nine chapters on elementary reactions in systems does not appear and which is intended for use as a college textbook has been published under the title *Free radical mechanisms*. New York, Reinhold Publishing Corporation, 1946, 231 p., $3.00. The full-size work described here is designed for graduate chemists, especially research workers.

STEIN, WILLIAM H AND OTHERS

Amino acid analysis of proteins. New York The New York Academy of Sciences 1946 184 p. illus 23 cm. (New York Academy of Sciences. Annals. Vol. 47 p. 57–240 1946) Paper $2.25 356

Contents: Introduction, by W. H. Stein. The contribution of the analytical chemist to protein chemistry, by H. B. Vickery. The use of specific precipitants in the amino acid analysis of proteins, by W. H. Stein and S. Moore. The isotope dilution method of amino acid analysis, by D. Shemin and G. L. Foster. Chromatographic and ion exchange methods of amino acid analysis, by R. K. Cannan. Microbiological methods in amino acid analysis, by E. E. Snell. Enzymatic methods in amino acid analysis, by R. M. Archibald. Amino acid composition of simple proteins, by E. Brand. Some correlations between physico-chemical data and the amino acid composition of simple proteins, by J. T. Edsall. Conclusion, by H. T. Clarke.

Note: A collection of papers presented at a conference held in October 1945 under the auspices of the New York Academy of Sciences. The volume as a whole offers a review and critical evaluation by chemists, biologists, and medical scientists of the various methods used to determine the amino acids produced by the hydrolysis of proteins. Of particular interest is the description of an apparently complete analysis of a simple protein. Brief bibliographies are included.

WEISSBERGER ARNOLD editor

Physical methods of organic chemistry New York Interscience Publishers Inc., 1945–46 2 v illus. 24 cm. $9.50 each. 357

Contents: Volume I: Determination of melting and freezing temperatures, by E. L. Skau and H. Wakeham. Determination of boiling and condensation temperatures, by W. Swietoslawski. Determination of density, by N. Bauer. Determination of solubility, by R. D. Vold and M. J. Vold. Determination of viscosity, by H. Mark. Determination of surface and interfacial tension, by W. D. Harkins. Parachor, by G. W. Thomson. Determination of properties of monolayers and duplex films, by W. D. Harkins. Determination of osmotic pressure, by R. H. Wagner. Determination of diffusivity, by A. L. Geddes. Calorimetry, by J. M. Sturtevant. Microscopy, by E. E. Jelley. Determination of crystal form, by M. A. Peacock. Crystallochemical analysis, by J. D. H. Donnay. X-ray diffraction, by I. Fankuchen. Electron diffraction, by L. O. Brockway. Refractometry, by N. Bauer and K. Fajans. Volume II: Spectroscopy and spectrophotometry, by W. West. Colorimetry, photometric analysis, and fluorimetry, by W. West. Polarimetry, by W. Heller. Determination of dipole moments, by C. P. Smyth. Conductometry, by T. Shedlovsky. Potentiometry, by L. Michaelis. Polarography, by O. H. Muller. Determination of magnetic susceptibility, by L. Michaelis. Determination of radioactivity, by W. F. Bale and J. F. Bonner, Jr. Mass spectrometry, by D. W. Stewart.

Note: Proved methods that have been found useful in determining the physical constants of organic substances are brought together in this work. Many of the methods would also be usable for similar determinations made on inorganic materials. The chief aim of the work is to relieve professional chemists and graduate students of the need to search for these methods among the many widespread independent sources. Because of the extensive scope of many of the topics dealt with, the reader is often referred to the supplementary literature for a complete treatment. However sufficient theory is presented to enable the chemist to properly evaluate the usefulness of the various techniques for his own needs. Photographs, drawings, and diagrams are used where needed for clarity and a subject index covering both volumes is included in volume II. A second edition is scheduled for publication in 1949.

WERTHEIM EDGAR

Introductory organic chemistry with certain chapters on biochemistry Second edi

tion. Philadelphia The Blakiston Company 1948 473 p. illus. (part col d) 24 cm. $3 75 358

Contents (abridged) Saturated hydrocarbons. Unsaturated hydrocarbons. Halogen derivatives. Ethers. Aldehydes and ketones. Esters, fats, oils, and waxes, soaps. Amides, urea, amines. Carbohydrates. Aromatic hydrocarbons, halogen compounds, sulfonic acids. Aromatic nitro compounds, amines, diazo compounds. Terpenes, dyes, heterocyclic compounds. Amino acids, proteins. Glycosides, enzymes, hormones, vitamins. Metabolism. Foods and dietary necessities. Appendix. Index.

Note (977) This text has been prepared for the use of college students whose fields of study require background knowledge of organic chemistry but who are not planning to become organic chemists. The treatment assumes that the student has completed a basic course in general chemistry. Emphasis is placed on the chemical reactions underlying the production of commercially important goods, rather than on basic chemical principles. In this edition new products and processes hich have been developed since the publication of the first edition are described and there are other minor changes such as the use of models to illustrate certain molecules.

WILLIAMS, ROGER JOHN AND LEWIS F HATCH

An introduction to organic chemistry Fifth edition New York D Van Nostrand Company Inc. 1948 668 p. illus 22 cm. $4 75 359

Contents (abridged) Saturated hydrocarbons Halogen substitution products of saturated hydrocarbons. Unsaturated hydrocarbons. Alcohols. Ethers. Aldehydes and ketones. Acids. Grignard reagents. Amines. Nitriles, cyanates, and other nitrogen compounds. Sulfur compounds. Polyalcohols and their derivatives. Dicarboxylic acids. Hydroxy acids. Unsaturated acids. Amino acids, proteins and related substances. Carbohydrates. Cycloparaffins, terpenes and camphors. Benzene and its homologs. Aromatic nitro derivatives and sulfonic acids Diazo and related compounds. Phenols. Aromatic alcohols, aldehydes and ketones. Aromatic carboxylic acids. Quinones. Naphthalene and its derivatives. Anthracene and its derivatives. Dyes—Indicators Alkaloids. Organic substances of special biochemical interest. Appendices Index.

Note. (981) A college textbook which has been rather widely adopted since the publication of the first edition in 1927 The main types of compounds are considered, but there is considerably less detail than in some introductory texts in the subject Reactions are presented for the most part in terms of electronic configurations, and the phenomena of organic chemistry are related to the student's previous study of inorganic chemistry The revisions in this edition are fairly numerous and important. Such new developments as DDT gammexane, fluorocarbons, and folic acid are discussed and more detailed treatments are given of chemical reactivity in relation to atomic structure, unsaturated hydrocarbons, petroleum, nitroparaffins, and other topics.

POLYMERS AND POLYMERIZATION

ALFREY, TURNER JR.

Mechanical behavior of high polymers. New York Interscience Publishers Inc. 1948 581 p illus. 24 cm. (High polymers a series of monographs on the chemistry, physics, and technology of high polymeric substances. Vol. VI) $7 75 360

Contents: Introduction. The plastoelastic behavior of amorphous linear high polymers. Three-dimensional cross-linked polymers. Crystallization of high polymers Plasticization and solution Systems containing high polymers and materials of low molecular weight. Ultimate strength and related properties. Appendices Subject index.

Note. Practically all of the high polymers that have found applications as synthetic rubbers and textiles or as plastic materials owe their usefulness to such mechanical characteristics as plasticity and elasticity In this book plasticity elasticity creep, and other mechanical phenomena are considered from scientific viewpoint and are related to molecular structure. The work is based on an extensive survey of the published literature, and statements in the text are keyed to the chapter bibliographies. It should be of considerable value to research workers in the field.

CARSWELL, THOMAS SMYTH

Phenoplasts their structure, properties, and chemical technology New York Interscience Publishers Inc., 1947 267 p. illus. 24 cm. (High polymers a series of monographs on the chemistry physics and technology of high polymeric substances. Vol. VII) $3 00 361

Contents: History of the development of phenoplasts. Chemical structure of the phenoplasts. Phenoplasts from higher aldehydes. Phenoplasts from polyhydric phenols. The physical structure of the phenoplasts. Fillers for phenoplast molding powders. Fillers and resins for phenoplast laminates. Mechanical properties of molded phenoplasts. Mechanical properties of laminated phenoplasts. Electrical properties of phenoplasts. Thermal properties of phenoplasts. Chemical resistance of phenoplasts. Oil-soluble phenoplasts. Phenoplasts as ion-exchange resins, by Donald E. Herr Technical manufacture of phenoplasts. Molding technique for phenoplasts, by Carl H. Whitlock. Miscellaneous technical applications of phenoplasts. Author index. Subject index.

Note: The discovery of the phenoplasts, phenolics, dates back to 1872 when Adolf Baeyer first described the reaction between phenols and aldehydes. However it was not until 1910, when Leo H. Baekeland began the manufacture of Bakelite that they achieved commercial importance. This volume presents survey and review of present-day knowledge regarding their structure and chemical and physical properties. The greater part of the volume deals with the theoretical aspects of the subject, but manufacturing and molding methods are briefly described. No formal bibliography is provided, but references to the literature of the subject, particularly during the past ten years, are given as footnotes.

DETROIT WAYNE UNIVERSITY

Advancing fronts in chemistry Volume I High polymers edited by Sumner B Twiss. A series of lectures sponsored by Wayne University under the direction of Neil E. Gordon, Chairman, Department of Chemistry New York Reinhold Publishing Corporation, 1945 196 p. illus. 23 cm. $4 00 362

Contents Molecular structure and mechanical behavior of high polymers, by Herman F Mark. The relation between structure and physical properties of high polymers, by Samuel S. Kistler Some applications of catalysis to hydrocarbon reactions of importance in the synthesis of high polymers, by Edgar C. Britton Some aspects of the mechanism of addition polymerization, by Charles C. Price. Polymerization as study of reactions of free radicals, by Frank R. Mayo. Molecular size distribution in high polymers, by Walter H. Stockmayer. Effect of chain length on physical properties of cellulose derivatives, by Emil Ott. Nature of the solid state of chain polymers, by William O. Baker Mechanical properties of concentrated solutions of high polymers, by John D. Ferry Some concepts of textile fibers, by Milton Harris. Index.

Note. The lectures represent series planned to interpret recent information derived from industrial and university experiments and to correlate it with currently important concepts of polymerization. The treatment was aimed both at chemists beginning their study of high polymers and at specialists already doing research in this branch of chemistry Lists of references accompany most of the lectures portraits and biographical sketches of the ten authors are provided, and there is considerable illustrative matter such as diagrams and graphs.

MARCHIONNA, FREDERICK

Butalastic polymers their preparation and applications, a treatise on synthetic rubbers. New York Reinhold Publishing Corporation 1946 642 p. illus. 21 cm. $8.50 363

Contents. Introduction—synthetic rubber—what is it? Historical retrospect. Part Source and production of monomers Halobutadienes production. Part II, Polymerization—mechanism and processes Mechanisms of polymerization processes. Polymerization of isoprene Polymerization of dimethylbutadiene. Polymerization of butadiene. Copolymers and interpolymers of butadiene. Photochemical polymerization. Polymerization of haloprenes. Butadiene-II interpolymers. Butabutene-I-heteropolymers. Part III, Processing and industrial applications of butalastics. Compounding and vulcaniza-

tion of butadiene. Plastic and fluid butadienics compositions. Filming, extruding, casting, and laminating. Miscellaneous articles. Properties of butadienics. Butadienic derivatives. Indexes.

Note: The term "butadienics" was suggested by Professor Ernst A. Hauser as a generic name for elastic and plastic polymers of butadiene compounds. Such polymers are the subject of this book, whether they are of interest as rubber substitutes or in some other way. The work is essentially an organized summary of the immense literature pertaining to the subject, and statements are keyed to number references in the extensive bibliographies appended to each chapter.

PRICE, CHARLES COALE

Mechanisms of reactions at carbon-carbon double bonds. New York Interscience Publishers Inc., 1946 120 p illus. 23 cm. (Lectures on progress in chemistry H. Mark, editor) $2.50 364

Contents: Electronic structure of unsaturated organic molecules. Ionic reactions involving double bonds. Free radical reactions involving double bonds. Free radical addition polymerization. Copolymerization. Emulsion and suspension polymerization. Polar polymerization. Index.

Note: This book presents a short but meaty survey of theories and experimental data on the mechanisms of reactions which are entered into by molecules and free radicals that contain one or more unsaturated carbon atoms. These mechanisms are then related to polymerization processes. The material originated as a series of lectures delivered at the Institute of Polymer Research of the Polytechnic Institute of Brooklyn.

ROBINSON HOWARD ADDISON editor

High-polymer physics a symposium published under the auspices of the American Institute of Physics. Brooklyn N Y Remsen Press Division, Chemical Publishing Co. Inc., 1948 572 p illus. 22 cm. $12.00 365

Contents: Part I, Determination of the molecular structure of high polymers: The use of color and fluorescence indicators for determining the structure of glasses, by W A. Weyl. Applications of infra-red methods in the structural examination of synthetic rubber by J. E. Field, D E. Woodford, and S. D Gehman. An X-ray diffraction investigation of some polyglutamides, by K. J Palmer Part II, The physical properties of high polymers: The mechanical properties of textiles (the simple non-Newtonian model) by H. Eyring and G. Halsey The elastic properties of cork, by S. L. Dart and E. Guth. Significance of the equation of state for rubber by E. Guth, P E. Wack, and R. L. Anthony Viscometric investigation of dimethylsiloxane polymers, by A J. Barry The formation of bonded water films on dielectrics under conditions of high humidity by R. F Field The effect of time on thermal expansion and second-order transition points in high polymers, by R. S. Spencer and R. F Boyer. A new approach to the theory of relaxing polymeric media (including an appendix "Creep under constant load in tension") by M. S. Green and A. V Tobolsky (with P J. Blatz) The theory of permanent set at elevated temperatures in natural and synthetic rubber vulcanizates, by R. D. Andrews, A. V Tobolsky, and E. E. Hanson. Stress-time-temperature relations in polysulfide rubbers, by M. D Stern and A. V Tobolsky Crystallization of unvulcanized rubber at different temperatures, by L. A. Wood and N Bekkedahl. Tackiness of GR-S and other elastomers, by W F Busse, J M. Lambert, and R. B. Verdery Electrostatic properties of rubber and GR-S, by R. S. Havenhill, H. C. O'Brien, and J J Rankin. Part III, The chemical physics of high polymers: Application of the methods of molecular distribution to solutions of large molecules, by B. H. Zimm. Remarks on the viscosity of dilute solutions of polymers and related phenomena, by R. Simha. Thermal polymerization of drying oils, by H. E. Adams and P O. Powers. Determination of polymer-liquid interaction by swelling measurements, by P Doty and H. S. Zable. Some thermodynamic properties of slightly cross-linked styrene-divinyl benzene gels, by R. F Boyer and R. S. Spencer Part IV Instrumentation and high polymers: Thermal diffusion of polymer solutions, by P Debye and A. M. Bueche. A photoelectric instrument for light scattering measurements and a differential refractometer by P P Debye. An attachment for determining the angular distribution of scattered light in a 90-degree turbidimeter, by J Morton Wilson. Subject index. Author index.

Note: A collection of papers that were presented at a symposium held in January 1946 under the auspices of the High Polymer Division of the American Physical Society Most of the papers have been printed in periodicals, but some that were so published have been revised for this volume and several are printed here for the first time. The majority of the contributors are associated with industrial research laboratories.

SCHMIDT, ALOIS X., AND CHARLES A. MARLIES

Principles of high-polymer theory and practice fibers plastics rubbers, coatings, adhesives New York McGraw Hill Book Company Inc., 1948 743 p. illus. 23 cm. (McGraw Hill chemical engineering series, S D Kirkpatrick, consulting editor) $7.50 366

Contents: Introductory definitions and concepts. Molecular forces. Some special behaviors and properties of high polymers. Polymer formation and modification. Structures of high polymers. Solubility and molecular-weight relations. Rheology Molding and manipulation. Mechanical properties. Electrical, thermal, and optical properties. Fibers and fibrous products. Rubbers. Surface coatings. Adhesives. Resin product development: phenolic resins. Appendix. Index.

Note: A textbook that is designed for use in junior and senior undergraduate courses and in graduate courses. The authors have made a special effort to provide a broad introduction to both the chemistry and the chemical engineering of this diverse group of substances, but most of the material presented will be of more use to men preparing for practical manufacturing and related work than to men preparing for theoretical research. Because of its broad scope and the abundance of technical data, the work should find some use in libraries as a reference book. Selected lists of references to related literature are included.

PHYSICAL CHEMISTRY

ADVANCES IN CATALYSIS AND RELATED SUBJECTS Volume I. Edited by W G Frankenburg V I. Komarewsky and E. K. Rideal. New York Academic Press Inc., 1948 321 p illus. 24 cm. $7.80 367

Contents. The heterogeneity of catalyst surfaces for chemisorption, by H. S. Taylor Alkylation of isoparaffins, by V N Ipatieff and L. Schmerling. Surface area measurements, by P H. Emmett. The geometrical factor in catalysis, by R. H. Griffith. The Fischer Tropsch and related processes for synthesis of hydrocarbons by hydrogenation of carbon monoxide, by H. H. Storch. The catalytic activation of hydrogen, by D D Eley Isomerization of alkanes, by H. Pines. The application of X-ray diffraction to the study of solid catalysts, by M. H. Jellinek and I. Fankuchen. Author index. Subject index.

Note Each of the original papers in the volume is essentially a monograph of the specific topic in catalysis which is named in its title. The current knowledge and techniques are reviewed in detail, and the pertinent literature is cited. The authors are recognized authorities on the subjects of their articles, and in most cases have made important contributions to fundamental knowledge. The papers are addressed to physicists and chemists.

AMSDEN JOHN PAGE

Physical chemistry for premedical students. New York McGraw Hill Book Company Inc., 1946 298 p. illus. 21 cm. (International chemical series Louis P Hammett, consulting editor) $3 75 368

Contents: Dimensions and units. Gases. Liquids. Solutions. Properties of solutions. Chemical equilibrium. Hydrogen ion. Oxidation and reduction. Speed of reaction—catalysis—adsorption. The colloidal state—the Donnan equilibrium. Correlated list of visual aids. Index. Table of logarithms.

Note: The special viewpoint of this introductory textbook is indicated by the title. Selected basic principles of the subject are discussed concisely and applications to physiological phenomena are pointed out. A generous number of problems for the student to solve are included and the answers are given.

ANSON, M L AND OTHERS

Surface active agents. New York The New York Academy of Sciences 1946 184 p illus.

23 cm. (New York Academy of Sciences. Annals Vol. 46 p 347–530 1946) Paper $2.25 369

Contents Introduction to the Conference on Surface Active Agents, by M. L. Anson. The structure and properties of solutions of colloidal electrolytes, by A. W Ralston. Surface active agents at interfaces, by E. K. Fischer and D. M. Gans. Certain aspects of the chemistry of surface active agents, by D Price. Properties involving surface activity of solutions of paraffin chain salts, by L. Shedlovsky Surface active agents in biology and medicine, by E. I Valko. The nature of the bactericidal action of surface active agents, by R. D Hotchkiss. Surface active compounds in flotation. Ore dressing, by M. H. Hemlalls. Surface active agents in industry by R. R. Ackley

Note The papers comprising this volume were presented at conference held in January 1945 which was sponsored by the New York Academy of Sciences. The purpose of the study was to stimulate interest in the further study of the fundamental theory of surface active agents and of the relationship between their structure and properties. Thus, the majority of the papers stress the theoretical aspects of the subject, but applications of these agents in the fields of biology medicine, and industry are considered. In all cases the authors are leading investigators in various industrial laboratories. Foot-note references are included. There is no index.

BIKERMAN JACOB J

Surface chemistry for industrial research. New York Academic Press, Inc., 1948 464 p illus. 23 cm. $8 00 370

Contents (abridged) Liquid-gas. Liquid-liquid. Solid-gas. Solid-liquid. Solid-liquid gas, solid-liquid liquid. Electric surface phenomena. Author index. Subject index.

Note. An interesting aspect of this book is the great variety of indicated applications to industrial processes of the principles and phenomena of surface chemistry. Many recorded observations have yet to be applied, and one of the author's objects has apparently been to arouse interest among industrialists, engineers, and research workers in company laboratories. However most of the work is devoted to discussions of theory and experimental investigations that have been published. Pertinent literature is cited in extensive lists of references. The author is on the staff of the Merck Research Laboratories.

BURK ROBERT EMMETT, AND OLIVER GRUMMITT editors

Chemical architecture. New York Interscience Publishers, Inc., 1948 202 p. illus. 24 cm. (Frontiers in chemistry Vol. v) $3.50 371

Contents Introducing the collaborators. Applications of molecular geometry in the field of reaction mechanisms, by H. S. Taylor Dipole moment, resonance and molecular structure, by C. P Smyth. Structure of coordination compounds, by W C. Fernelius X-ray studies of randomness in various materials, by B E. Warren. Light scattering in polymer solutions, by H. Mark. The nature of inorganic gels, by H. W Thomas Subject index.

Note This work is similar in origin and purpose to other volumes in the same series (see Index) The papers included were first delivered as lectures at Western Reserve University under plan whereby outstanding scientists visit the University and lecture on their own specialties or work. Each lecture is either description of recent advances or concise summary of the knowledge of topic which is currently of interest or importance. A bibliography of the related literature accompanies each paper A useful feature for libraries is the inclusion of portraits and brief biographical sketches of the contributors to each volume.

CLARK WILLIAM MANSFIELD

Topics in physical chemistry, a supplementary *text for students of medicine.* Baltimore The Williams & Wilkins Company 1948 738 p. illus. 24 cm. $10 00 372

Contents (abridged) Review of certain indispensable conventions. The standard chemical balance. Measurements of volume Density and some of its clinical uses. Sedimentation in gravitational and centrifugal fields. Certain limiting laws of gases. Distribution of substances between phases. Diffusion. Impressionistic sketches of phenomena associated with semipermeable membranes, artificial and natural. The laws of mass-action. Electrolytes in retrospect. Equilibria in proton exchanges. Certain properties of protein solutions. Brief excursions in thermodynamics. Oxidation-reduction with special reference to electromotively active systems The "glass electrode" and potentiometry The polarograph. A picture of atomic structure. Refraction, double refraction and polarized light. Elements of stereochemistry. Emission and absorption of radiant energy Luminescence [fluorescence and phosphorescence] Appendix. Index.

Note. A useful review designed for first-year medical students, of those basic principles of physical chemistry which were studied in previous courses, and which are prerequisite to further study in biochemistry and related topics. It is not intended for classroom use but for self-instruction and reference. The treatment is comprehensive rather than exhaustive and the topics chosen are those which the author's experience has shown to be most needed. Suggestions for further reading and review problems are included at the end of some chapters.

DANIELS, FARRINGTON

Outlines of physical chemistry New York John Wiley & Sons, Inc. 1948 713 p. illus. 24 cm. $5 00 373

Contents. Introduction. The gaseous state. Atomic and molecular forces. The crystalline state Physical properties and molecular structure. Heat, work, and heat capacity Thermochemistry Thermodynamics. The liquid state. Solutions. Solution of nonvolatile solutes. Chemical equilibria. Phase diagrams. Chemical kinetics. Electric conductance. Electromotive force. Ionic equilibria. Colloids. Quantum theory Photochemistry Atomic and nuclear structure. Appendix. Author index. Subject index.

Note: The history of this book goes back to 1913 when *Outlines of theoretical chemistry* by Frederick H. Getman, was issued by the same publishers. From 1913 to 1941 the work passed through seven editions and became solidly established as standard text. The present title was first used on the seventh edition. Daniels' name appeared first on the title page of the fifth edition along with Getman's. Compared to the seventh edition the present version —which is regarded by the author as the first edition of new work—shows considerable amount of re-arranging and rewriting; but the purpose and scope of the book have not been fundamentally changed. It remains clearly written and rather comprehensive introduction, designed for college use but of some value for self-instruction also.

DORSEY, NOAH ERNEST

The freezing of supercooled water Philadelphia The American Philosophical Society 1948 245–328 p illus. 30 cm. (American Philosophical Society Transactions. New series vol. 38 part 3) Paper $1 75 374

Contents Introduction Experimental data. Thermal initiation of freezing. Mechanical initiation of freezing. Miscellaneous. Theoretical considerations: Embryos. Recognized theories of freezing Failure of the homogeneous theory A new theory Summary Appendix: Sealed bulbs—contents and histories. References. Index.

Note. A detailed account of original investigations conducted by the author to determine the effect of such factors as heating, prolonged chilling, distillation, filtration, and age of specimen on the supercooling and freezing of water The series of investigations was undertaken because the author's curiosity was aroused by inconsistencies in results reported and theories offered by previous investigators. As result of his investigation, he puts forth here new theory of freezing, which is designed to account for previously unexplained phenomena. The bibliography of related literature is extensive.

EASTMAN ERMON DWIGHT AND GERHARD K ROLLEFSON

Physical chemistry New York McGraw Hill Book Company Inc. 1947 504 p illus. 24 cm. (International chemical series Louis P Hammett, consulting editor) $4.50 375

Contents (abridged) Interactions of material systems. Thermochemistry Properties of gases. The kinetic theory of gases. The crystalline state. Energy and heat capacity of gases and crystals. The liquid state. Atomic structure. Molecular structure. Radioactivity and nuclear reactions. Solutions. Phase equilibria in one-component systems. Vapor pressure and related properties of ideal solutions and dilute solutions. Phase equilibria in two-component sys-

tems. Phase equilibria in three-component systems Equilibrium in chemical reactions. Chemical kinetics. Electrical conductance and transference. Electromotive force in galvanic and electrolytic cells. Interactions of light with matter Surface phenomena. Index.

Note An introduction to the fundamentals of physical chemistry based on courses given at the University of California. The book is intended for use as text and reference tool by third- or fourth-year college students. The treatment, although not necessitating detailed knowledge of higher mathematics, does require knowledge of calculus. Review problems are given at the end of each chapter.

Fuoss Raymond Matthew

The development of theoretical electrochemistry Sponsored by Phi Lambda Upsilon and the Department of Chemistry, The Pennsylvania State College, State College, Pennsylvania. State College, Pennsylvania The Pennsylvania State College, 1948 24 p 28 cm. (Twenty-second annual Priestley lectures) Paper $2.00 376

Contents Volta versus amperes. Electrolytes: puzzles and progress. Precision enters experiment. Precision enters theory The ionic atmosphere.

Note A masterly account of the growth of knowledge which now constitutes our understanding of electrochemical phenomena. The author shows that the development of this body of knowledge began about 1800 when Volta invented the voltaic pile which was the first reliable source of continuous electrical energy. The important developments during the nineteenth century are discussed and the story is brought down to the theory of Debye and Hückel, published in 1923. Although prepared as lectures and therefore less formal than some histories of chemistry familiarity with chemical terminology and with the elementary concepts of chemistry is assumed.

Glasstone Samuel

The elements of physical chemistry New York D Van Nostrand Company Inc. 1946 695 p. illus. 24 cm. $5.00 377

Contents: Introduction Atomic theory The structure of the atom. Electronic structures of atoms and molecules. The properties of gases. Liquefaction and the properties of liquids. The solid state. Thermodynamics and thermochemistry The second law of thermodynamics. Dilute solutions. Chemical equilibrium. Free energy and chemical equilibrium. Phase equilibria. The conductance of electrolytes. Electromotive force. Equilibria in electrolytes. Hydrolysis and neutralization. Surface chemistry and colloids. Kinetics of chemical reactions. Photochemistry Miscellaneous problems. Physical constants and atomic weights. Logarithms. Answers to problems. Index.

Note: An introductory textbook designed not only for college students intending to specialize in chemistry but also for those who are interested in other branches of science and technology and need only an elementary knowledge of physical chemistry There is approximately one-half as much textual matter as in the author's *Textbook of physical chemistry* However this book is not condensation of that work, but is fresh treatment of the subject from more elementary viewpoint. In many cases, the new work will be more satisfactory for library use and reference because the exposition of basic laws and phenomena is easier to understand.

Glasstone, Samuel

Textbook of physical chemistry Second edition. New York D Van Nostrand Company Inc., 1946 1320 p illus. 24 cm. $12 00 378

Contents: Atomic structure and atomic spectra. Radioactivity and isotopes. First and second laws of thermodynamics. The gaseous state. The solid state. Changes of state. The liquid state. Physical properties and molecular structure. Dilute solutions. Phase equilibria. Chemical equilibrium and free energy Electrochemistry Chemical kinetics. Surface phenomena. Index.

Note: This new edition of standard work follows the same comprehensive plan of organization which includes an historical approach to the topics discussed and consideration of the experimental methods involved, as the first edition of 1940. Many revisions have been made throughout to bring the material up to date or to make the treatment clearer and the already extensive bibliographies have been increased by references to recent work. The thermodynamic symbols used in the first edition have been replaced, though with some misgivings on the author's part, by those more widely used and hence more familiar to students. The book is intended for use in advanced courses and as reference work for teachers, students, and chemical engineers.

Glasstone, Samuel

Thermodynamics for chemists. New York D Van Nostrand Company Inc., 1947 522 p. illus. 23 cm. $5.00 379

Contents Heat, work and energy Properties of thermodynamic systems. The first law of thermodynamics. Heat changes and heat capacities. Thermochemistry Calculation of energy and heat capacity The second law of thermodynamics. Entropy relationships and applications. Entropy determination and significance. Free energy Phase equilibria. Fugacity and activity Free energy and chemical reactions. The properties of solutions. Activities and activity coefficients. Solutions of electrolytes. The Debye-Hückel theory Partial molar properties. E. M. F.'s and the thermodynamics of ions. Appendix: Constants and conversion factors. Properties of gases and liquids. Heat capacities of gases. Heat capacities of solids. Standard free energies and heats of formation, and entropies. Integral heats of solution of salts. Index.

Note: This new textbook has those characteristics of thoroughness and clarity which have come to be expected in the books of this author. It offers an extended treatment of thermodynamics from the viewpoint of chemistry and particularly chemical engineering. A considerable number of problems are worked out in this text, and an even larger number of exercises are included for solution by the student, the handling of differential equations being required in both cases. The discussions of the applications of statistical methods to problems in chemical thermodynamics are special feature. There are footnote references to pertinent literature.

Hunt, Herschel

Physical chemistry New York Thomas Y Crowell Company 1947 610 p illus. 22 cm. $4 75 380

Contents Gases. Thermochemistry Elementary thermodynamics. Liquids. Solids. Solutions. Atomic structure and molecular properties. Phase rule. Chemical kinetics. Photochemistry Homogeneous and heterogeneous equilibrium. Ionic equilibrium. Electrical conductivity and electrical transference. Electrochemistry Statistical and quantum mechanics. The colloidal state. Index. Answers to the problems.

Note: An unusual feature of this college textbook is its inclusion of full mathematical developments in order to clarify the discussions of basic physical chemical principles. By stressing the mathematical side of the subject, the author aims to teach the value of logical reasoning in solving problems, and to render the text easier for students to interpret. All of the fundamental topics of physical chemistry are included, and its practical applications are covered. Chapter references and chapter problems are given. The ability to use integral calculus is prerequisite.

Ledoux, Edward

Vapor adsorption industrial applications and competing processes. Brooklyn Chemical Publishing Company Inc., 1945 360 p. illus. 22 cm. $8.50 381

Contents: Symbols Part I, Static adsorption The adsorption equilibrium. Effects of an external force applied to the liquid or solid phases. Adsorption potential and properties of the adsorbate. Heat of adsorption. Capillary adsorption. Part Saturation of air: Definitions. Heat transfer and heating efficiency Vapor transfer and saturation efficiency Adiabatic saturation. Part III, Dynamic adsorption: Isothermal desorption. Isothermal adsorption. Adiabatic adsorption. Adiabatic desorption. Part IV Industrial applications: Industrial applications of static adsorption. Dehumidification by condensation. Dehydration by absorption. Dehumidification by adsorption. Air conditioning. Conditioning of underground spaces Drying of hygroscopic material. Forced-draft, low-temperature drying Dehydration of compressed gases. Drying of optical instruments. Vapor recovery Appendix. Index.

Note. The term, *adsorption* is used to describe the concentration or retention of molecules on surfaces, universal phenomenon occurring on every solid and liquid surface. This book is compilation of the theories of numerous investigators and writers on adsorption, with view to indicating gaps in the field that need further investigating and to helping engineers and others whose task is to build and operate dynamic adsorption units on an industrial scale.

use of these curves and an explanation of the methods used in their derivation are included. The calculations and the experimental verifications of these were done under the auspices of the Sonar Design Section of the Bureau of Ships, U.S. Navy and the work was published originally by the Department of Commerce in 1945 as P.B. Report 22410.

HEISING RAYMOND ALPHONSUS, editor

Quartz crystals for electrical circuits their design and manufacture. New York D Van Nostrand Company Inc., 1946 563 p. illus. 24 cm. $6.50 394

Contents: Introduction, by R. A. Heising. Quartz crystal applications, by W P Mason. Methods for specifying quartz crystal orientation and their determination by optical means, by W L. Bond. The use of X-rays for determining the orientation of quartz crystals, by W L. Bond and E J Armstrong. Raw quartz, its imperfections and inspection, by G. W Willard. Use of the etch technique for determining orientation and twinning in quartz crystals, by G. W Willard. Modes of motion in quartz crystals, the effects of coupling and methods of design, by R. A. Sykes. Theoretical analysis of modes of vibration for isotropic rectangular plates having all surfaces free, by H. J. McSkimin. Principles of mounting quartz plates, by R. A. Sykes. Sawing, grinding and lapping, by W L. Bond. Adjusting to frequency by G. M. Thurston. Metal electrodes deposited on quartz crystals by the evaporation process, by H. W Weinhart and H. G. Wehe. Piezoelectric crystals in oscillator circuits, by I. E. Fair. The mounting and fabrication of plated quartz crystal units, by R. M. C. Greenidge. Effects of manufacturing deviations on crystal units for filters, by A. R. d'Heedene. The measurement of the performance index of quartz plates, by C. W Harrison. The wire mounted crystal unit, by W F Doran and A. E. Brickard. Low frequency quartz crystal cuts having low temperature coefficients, by W P Mason and R. A. Sykes. Index.

Note. The greater part of this book originated as lectures that were prepared to explain the techniques of quartz crystal design and manufacture to engineers and other technical personnel of the Western Electric Company. Here the lectures have been revised and supplemented to make an extensive presentation of both the theoretical and practical aspects. Specific details of production processes together with illustrations of machines used in manufacturing are given in several of the chapters.

WYCKOFF, RALPH WALTER GRAYSTONE

Crystal structures. Section 1. New York. Interscience Publishers, Inc., 1948. [504 p.] illus. 26 cm. $8.00 395

Contents: Preface and introduction. Inorganic structures. Structures of the elements. Structures of the compounds RX. Structures of the compounds RX_2. Structures of complex binary compounds, R_nX_m. Structures of the compounds $R(MX_2)_n$. Compounds of the type $R_n(MX_4)_p$.

Note. A reference work of considerable importance in the field of crystallography. It supersedes the author's *The Structure of crystals*, second edition, New York, 1931–34, and is designed to serve essentially the same purpose. However, this work is published in loose-leaf form and is so arranged that it can readily be kept up to date. Each of the chapters has four parts: *Text*, *Tables*, *Illustrations*, *Bibliography*. In the Text portion information on the group, subgroups, and individual substances that does not lend itself to tabular presentation is given. The *Illustrations* portion contains diagrams and illustrations of molecular models of selected substances.

ZACHARIASEN, WILLIAM HOULDER

Theory of X-ray diffraction in crystals. New York John Wiley & Sons, Inc., 1945. 255 p. illus. 22 cm. $4.50 396

Contents: The nature of crystals. The symmetry of crystals. Theory of X-ray diffraction in ideal crystals. X-ray interference in real crystals. Appendix A. Dyadics. Appendix B. Elements of group theory. Index.

Note: Both the theory of space lattices and their symmetry properties as well as the theory of X-ray diffraction in crystals are discussed in this advanced textbook for graduates of physics and chemistry. Higher mathematics, including vector analysis, is prerequisite. Some of the material is based on the author's original researches. Bibliographic references to additional material on crystal structure are given at the end of most chapters and in occasional footnotes.

tems. Phase equilibria in three-component systems. Equilibrium in chemical reactions. Chemical kinetics. Electrical conductance and transference. Electromotive force in galvanic and electrolytic cells. Interactions of light with matter Surface phenomena. Index.

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HUNT HERSCHEL

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LEDOUX, EDWARD

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Note. The term, *adsorption*, is used to describe the concentration or retention of molecules on surfaces, universal phenomenon occurring on every solid and liquid surface. This book is compilation of the theories of numerous investigators and writers on adsorption, with view to indicating gaps in the field that need further investigating and to helping engineers and others whose task is to build and operate dynamic adsorption units on an industrial scale.

In the last Part of the book are examined some of the outstanding problems for whose solution adsorption has proved to be the most successful and also some of the competing methods, so that the engineer may see why adsorption best fits the case at hand.

LIVINGSTON, ROBERT
Physico chemical experiments. Revised edition. New York The Macmillan Company, 1948 267 p. illus. 22 cm. $3.50 382

Contents. Measurements, errors, and computations. The gaseous state. The liquid state. The solid state. The structure of atoms. Physical properties and molecular constitution. Solutions. Thermochemistry Equilibrium. Heterogeneous equilibrium. Chemical kinetics. Electrical conductance. Equilibria involving ions. Electromotive force. Electrolysis and polarization. Photochemistry The colloidal state. Appendix. Index.

Note. (1007) Two experiments have been added and one dropped, but no major change in either plan or concept has been made in the present revision of this college laboratory manual. There are now 41 experiments illustrating the basic principles of physical chemistry Although the author refers frequently to MacDougall's *Physical chemistry* revised edition, New York The Macmillan Company 1943, 721 p., $4.25 and to Kolthoff and Sandell's *Textbook of quantitative inorganic analysis*, revised edition New York The Macmillan Company 1943 794 p $4.50, the present volume can be used with any good modern textbook of physical chemistry

LONGSWORTH, LEWIS GIBSON, AND OTHERS
The diffusion of electrolytes and macromolecules in solution New York The New York Academy of Sciences 1945 138 p. illus. 23 cm. (New York Academy of Sciences. Annals Vol. 46 p 209–346 1945) Paper $2 00 383

Contents: The diffusion of electrolytes and macromolecules in solution historical survey by L. G. Longsworth. Theories and problems of liquid diffusion, by L. Onsager A conductance method for the determination of the diffusion coefficients of electrolytes, by H. S. Harned and D M. French. The diaphragm cell method of measuring diffusion, by A. R. Gordon Diffusion constant measurement in theory and practice, by E. M. Bevilacqua and others The effects of concentration and polydispersity on the diffusion coefficients of high polymers, by C. O Beckmann and J. L. Rosenberg.

Note The papers comprising this volume were presented at conference held in October 1944 which was sponsored by the New York Academy of Sciences. They have been prepared by leading investigators in the field of physical chemistry and are devoted primarily to descriptions of techniques and apparatus employed in the determination of diffusion constants and coefficients. Theories of the diffusion process and other aspects of the problem are summarized in the first two papers. There is no index.

LUDER WILLIAM FAY AND SAVERIO ZUFFANTI
The electronic theory of acids and bases New York John Wiley & Sons Inc., 1946 165 p illus 22 cm. $3 00 384

Contents Historical background Atomic orbitals and valence. The electronic theory of acids and bases Electrophilic and electrodotic reagents. Acidic and basic radicals. Neutralization. Titrations with indicators. Displacement. Catalysis Acid catalysis. Base catalysis. Alkoxides as catalysts. Conclusion. Index.

Note Five current theories of acids and bases are discussed in this book. These are (1) the water theory (2) the theory of solvent systems, (3) the proton theory (4) the positive-negative theory and (5) the electronic theory The authors believe that the electronic theory first proposed by G. N Lewis in 1923 is more usable than any of the others because it correlates more of the observed phenomena. Accordingly most of the book is devoted to an explanation of various chemical reactions in the light of the Lewis theory The book is based on series of articles that appeared in the *Journal of the American Chemical Society* the *Journal of chemical education*, and *Chemical reviews*. The original articles have been reorganized and extended.

MANTELL CHARLES LETNAM
Adsorption. New York McGraw Hill Book Company, Inc., 1945 386 p illus. 21 cm. (McGraw Hill chemical *engineering series*) $5 00 385

Contents The unit operation of adsorption. Theories of adsorption. Fuller's earth and activated clays. Aluminum oxide base materials. Bone char and related materials. Decolorizing carbons, water treatment carbon, Metal- and medicinal-adsorbent chars. Gas-adsorbent carbons. Silica gel. Magnesia and hydrous oxides. Solvent recovery and adsorption from gases. Odor removal. Gas masks. Gas hydrates. Dehydration of air and gases. Ion exchangers. Chromatographic adsorption analysis. Inspection, specifications, and testing of adsorbents. Appendix. Index.

Note: Except for the second chapter this work is entirely concerned with industrial and commercial applications of adsorption. The textual discussions and the tabular and graphical data are such as are useful to chemical engineers. There are frequent mentions and descriptions of specific installations and flow sheets are provided for many of them. There are numerous references to the pertinent literature, including patents.

MILLARD, EARL BOWMAN
Physical chemistry for colleges a course of instruction based upon the fundamental laws of chemistry Sixth edition. New York McGraw Hill Book Company Inc., 1946 682 p illus. 21 cm. (International chemical series Louis P Hammett, consulting editor) $4.50 386

Contents: Introduction Determination of atomic weights. Elementary thermodynamics. Properties of substances in the gaseous state. Properties of substances in the liquid state. Crystalline solids. Solutions. Solutions of ionized solutes. Thermochemistry Equilibrium in homogeneous systems. Heterogeneous equilibrium. Phase diagrams. Kinetics of homogeneous reactions. Radiation and chemical change. Periodic law of the elements. Radioactive changes. Atomic structure. Colloids. Surface chemistry Free energy of chemical changes. Potentials of electrolytic cells. Author index. Subject index.

Note (1010a) In this new edition of standard text for beginners, thermodynamics and phase diagrams have been accorded separate chapters and include more thorough presentation of the material than in the fifth edition (1941) Most of the text has been rewritten, and new experimental data included. Some new problems have been added.

COLLOID CHEMISTRY

ALEXANDER, JEROME, editor
Colloid chemistry theoretical and applied by selected international contributors. Volume VI General principles and specific industries synthetic polymers and plastics. New York Reinhold Publishing Corporation 1946 1215 p illus. 24 cm. $20.00. 387

Note (1031a) Continuing the plan of the earlier volumes of the series, seventy-one papers by contemporary authorities are presented in this volume. The final paper deals with nuclear energy thirty-two pertain to synthetic resins and plastics, and thirty-eight are devoted to special industries or chemical operations such as surface active agents, adhesives, colloidal graphite, flotation of minerals, and laundering. Extensive bibliographies are feature of most of the papers.

DEAN ROBERT BERRIDGE
Modern colloids an introduction to the physical chemistry of large molecules and *small particles. New York* D Van Nostrand Company Inc., 1948 303 p illus. 24 cm. $3 75 388

Contents Introduction. Methods for determining the size and shape of colloidal particles. Liquid surfaces. Adsorption. Ionic adsorption. High polymers. Plastics, resins and rubbers. Carbohydrates and proteins. Colloidal ions. Emulsions and foams. Hydrous oxides and silicates. Lyophobic colloids or suspensoids. Appendix. Index.

Note In contrast to most textbooks of colloid chemistry this one is designed for use in undergraduate courses. Although compara-

tively brief, it offers a sound review of the basic knowledge and some indications of applications. The chapters are accompanied by selected references to original papers and standard authorities. The student is assumed to have had a course in organic chemistry. In addition to the intended use the book should be helpful also to working chemists whose college training did not include courses in colloid chemistry

HARTMAN ROBERT JAMES

Colloid chemistry Second edition. Boston Houghton Mifflin Company 1947 572 p illus. 24 cm. $6.50 389

Contents (abridged) Part One, Surface chemistry: Subdivision of mass. General characteristics of adsorption. Quantitative aspects of adsorption. Theories of adsorption. Some applications and occurrences of adsorption. Contact catalysis. Part Two, Lyophobic colloidal systems: Colloidal systems. Preparation of lyophobic colloidal systems. Physical properties of lyophobic colloidal systems. Lyophobic colloidal systems and light phenomena. Electrical properties of lyophobic colloidal systems. The stability of lyophobic colloidal systems. Dialysis and ultrafiltration. Aerosols. Emulsions and foams. Unusual lyophobic colloidal systems. Part Three, Lyophilic colloidal systems: Chemical and physical properties of lyophilic colloidal systems. Gels. Swelling-shrinking and diffusion. Chemical and colloidal aspects of synthetic resins and plastics. Part Four The biocolloids and some colloidal aspects of organisms: Some chemical and colloidal aspects of the biocolloids. Biocolloidal constituents of foods. The biocatalysts—distribution of materials as affected by the biocolloids. Colloidal factors influencing growth and movements of organisms. Some colloidal aspects of blood and the nervous system. Some colloidal medicines. List of reference books. Name index. Subject index.

Note. (1024) This textbook for undergraduate students provides a broad critical review of the theories of colloidal phenomena, describes various industrial processes based on the principles of colloid chemistry and discusses the experimental methods used in the development of this science. In this edition an effort has been made to incorporate the more significant theoretical and practical advances in the field, without unduly increasing the length of the book. In particular a section has been added on adsorption isotherms and a chapter on the colloidal aspects of synthetic resins and plastics is now included. Some revisions have been made in the older chapters.

HAWLEY GESSNER GOODRICH

Small wonder the story of colloids. New York Alfred A. Knopf 1947 220 p. illus. 22 cm. $3 50 390

Contents What it's all about. Large things and small. Discovery and occurrence of colloids. Colloids become visible. Electrical habits. The purification of water. Curds and whey. The tears of the weeping tree. Blood. Glues and adhesives. The importance of surface. Soaps, detergents, and emulsifiers. Colloid chemistry and life. Danger for science. Index.

Note: An introduction to colloid chemistry designed to acquaint the reader with what colloids are, the way in which knowledge about them has advanced, and the part they play in life and growth and in the production of articles common in everyday life. A provocative book for the adult who wants to know the salient facts about an important subject and who lacks specialized scientific training. It will enable him to follow future developments in colloid chemistry intelligently and may well lead some readers to a more intensive study

KRAEMER, ELMER OTTO

Advances in colloid science. Volume II. Scientific progress in the field of rubber and synthetic elastomers. Initiated by the late Elmer O Kraemer edited by H. Mark and G. S. Whitby New York Interscience Publishers Inc., 1946 453 p illus. 23 cm. $4 50 391

Contents: Second-order transition effects in rubber and other high polymers, by R. F Boyer and R. S. Spencer. Crystallization phenomena in natural and synthetic rubbers, by Lawrence A. Wood. The study of rubberlike substances by X-ray diffraction methods, by C. W Bunn. The thermodynamic study of rubber solutions and gels, by Geoffrey Gee. Significance of viscosity measurements on dilute solutions of high polymers, by R. H. Ewart. The kinetic theory of rubber elasticity by E. Guth, H. M. James, and H. Mark. Vulcanization, by E. Harold Farmer. Rubber photogels and photovulcanizates, by H. P Stevens. Reinforcing and other properties of compounding ingredients, by Donald Parkinson. Appendix. Author index. Subject index.

Note. (1018) Continuing the plan of the first volume of the series, each paper in the present volume summarizes the current knowledge pertaining to the topic of the paper and concludes with a bibliography of the pertinent literature. Also, this volume contains an eight page biography of E. O. Kraemer with a bibliography of his publications. About twenty related articles that were published just before the book went to press are summarized in the appendix.

CRYSTALLOGRAPHY AND PIEZOELECTRICITY

CADY WALTER GUYTON

Piezoelectricity an introduction to the theory and applications of electromechanical phenomena in crystals. New York McGraw Hill Book Company Inc., 1946 806 p. illus. 23 cm. (International series in pure and applied physics, Lee A. DuBridge consulting editor) $9 00. 392

Contents (abridged) Crystallography Crystal elasticity Rotated axes and transformation of elastic constants. Vibrations of crystals. Elastic constants of crystals. Dielectric properties of crystals. Principles of piezoelectricity Special piezoelectric properties of certain crystals. Production and measurement of piezoelectric effects. Alternative formulations of piezoelectric theory The piezoelectric resonator The electrical equivalent of the piezo resonator. Properties and technique of quartz. The quartz resonator Resonators from other crystals, and composite resonators. The piezo oscillator. Rochelle salt—history general properties, and technique—piezoelectric observations—dielectric observations—interaction theory and dielectric properties—piezoelectric and elastic properties. The domain structure of Rochelle salt. Internal-field theory of Seignette-electric crystals. Pyroelectricity Piezo-optic, electro-optic, and other optical effects. Piezoelectricity in the light of atomic theory Ferromagnetism. General bibliography Author index. Subject index.

Note: In spite of the subtitle, this work ranks as a comprehensive treatment. It is written on the level of graduate students in physics and of physicists engaged in piezoelectric work in laboratories and industry As the chapter titles indicate, topics allied to piezoelectricity are also discussed; and the material on crystals includes quartz and all other kinds that are of interest. The techniques of manufacturing oscillators and other devices from crystals are covered but the treatment of them is less full than the treatment of the theoretical and mathematical aspects of the subject. The main bibliography contains 602 numbered entries to which statements and formulas in the text are keyed.

FRY WILLIAM J., AND OTHERS

Design of crystal vibrating systems for projectors and other applications by William J Fry John M. Taylor and Bertha W Henvis. Naval Research Laboratory A. H. van Keuren, Rear Admiral, U.S.N., Director Sound Division H. C. Hays Supt. New York Dover Publications Inc. 1948 182 p. illus. 24 cm. $3.50 393

Contents: Part I, Design curves: Calculation of η. Resonant frequency Acoustic impedance of backing material combinations. Resonant frequencies of systems with multiple-material backing. Electrical input impedance and transmitting response. Sensitivity and acoustic input impedance. Efficiency and stress. Acoustic input impedance of particular backing material systems. Part II, Theory: Fundamental equations. Electrical input impedance. Acoustic input impedance. Resonant frequency Sensitivity Stress. Appendices: Symbols, definitions, and conventions. Units and tables of constants. Longitudinal and thickness modes. Fundamental equations for thickness vibration.

Note: Essentially this volume is a presentation of technical data concerning the characteristics of piezoelectric crystal vibrating systems. It is made up largely of design curves which depict fundamental piezoelectric relations, and which are based on the analysis of a great number of crystal vibrating systems. Instructions for the

use of these curves and an explanation of the methods used in their derivation are included. The calculations and the experimental verifications of them were done under the auspices of the Sonar Design Section of the Bureau of Ships, U.S. Navy and the work was published originally by the Department of Commerce in 1945 as P.B. Report 12410.

HEISING RAYMOND ALPHONSUS, editor
Quartz crystals for electrical circuits their design and manufacture. New York D Van Nostrand Company Inc., 1946 563 p illus. 24 cm $6 50 394

Contents: Introduction, by R. A. Heising. Quartz crystal applications, by W P Mason. Methods for specifying quartz crystal orientation and their determination by optical means, by W L. Bond. The use of X-rays for determining the orientation of quartz crystals, by W L. Bond and E. J Armstrong. Raw quartz, its imperfections and inspection, by G. W Willard. Use of the etch technique for determining orientation and twinning in quartz crystals, by G. W Willard. Modes of motion in quartz crystals, the effects of coupling and methods of design, by R. A. Sykes. Theoretical analyses of modes of vibration for isotropic rectangular plates having all surfaces free, by H. J McSkimin. Principles of mounting quartz plates, by R. A. Sykes. Sawing, grinding and lapping, by W L. Bond. Adjusting to frequency by G. M. Thurston. Metal electrodes deposited on quartz crystals by the evaporation process, by H. W Weinhart and H. G. Wehe. Piezoelectric crystals in oscillator circuits, by I. E. Fair. The mounting and fabrication of plated quartz crystal units, by R. M. C. Greenidge. Effects of manufacturing deviations on crystal units for filters, by A. R. d'Heedene. The measurement of the performance index of quartz plates, by C. W Harrison. The wire mounted crystal unit, by W F Dreyer and A. E. Brichard. Low frequency quartz crystal cuts having low temperature coefficients, by W P Mason and R. A. Sykes. Index.

Note. The greater part of this book originated as lectures that were prepared to explain the techniques of quartz crystal design and manufacture to engineers and other technical personnel of the Western Electric Company. Here the lectures have been revised and supplemented to make an extensive presentation of both the theoretical and practical aspects. Specific details of production processes together with illustrations of machines used in manufacturing are given in several of the chapters.

WYCKOFF, RALPH WALTER GRAYSTONE
Crystal structures. Section 1. New York Interscience Publishers, Inc., 1948 [504 p.] illus. 26 cm. $8.00 395

Contents. Preface and introduction. Inorganic structures: Structures of the elements. Structures of the compounds RX. Structures of the compounds RX_2. Structures of complex binary compounds, R_mX_n. Structures of the compounds $R(MX_3)_n$. Compounds of the type $R_x(MX_4)_y$.

Note: A reference work of considerable importance in the field of crystallography It supersedes the author's *The Structure of crystals*, second edition, New York, 1931–34 and is designed to serve essentially the same purpose. However this work is published in loose-leaf form and is so arranged that it can readily be kept up to date. Each of the chapters has four parts: Text, Tables, Illustrations, Bibliography In the Text portion information on the group, subgroups, and individual substances that does not lend itself to tabular presentation is given. The Illustrations portion contains diagrams and illustrations of molecular models of selected substances.

ZACHARIASEN WILLIAM HOULDER
Theory of X-ray diffraction in crystals. New York John Wiley & Sons, Inc. 1945 255 p illus. 22 cm. $4 50 396

Contents: The nature of crystals. The symmetry of crystals. Theory of X-ray diffraction in ideal crystals. X-ray interference in real crystals. Appendix A: Dyadics. Appendix B Elements of group theory Index.

Note. Both the theory of space lattices and their symmetry properties as well as the theory of X-ray diffraction in crystals are discussed in this advanced textbook for graduates of physics and chemistry Higher mathematics, including vector analysis, is prerequisite. Some of the material is based on the author's original researches. Bibliographic references to additional material on crystal structure are given at the end of most chapters and in occasional footnotes.

GEOLOGY

GENERAL

HOWELL J V., AND A. I LEVORSEN

Directory of geological material in North America. Tulsa, Okla. The American Association of Petroleum Geologists Inc. 1946. 24 cm. (American Association of Petroleum Geologists. Bulletin. Vol. 30 no. 8 part II) Paper $0 75 397

Contents General material—national and continental in area: Publications and non-commercial publishing agencies, regional, national, and continental. Bibliographies, general. Dictionaries, glossaries, encyclopedias, statistics, handbooks. Miscellaneous books and publications of general geological interest. Commercial map publishers. Regional and national geologic and physiographic maps. State and province geological maps. Trade journals—oil, gas, mineral industry. Libraries furnishing photostat and microfilm service. Thin-section and rock-polishing service. Specific material—state and province in area. Canada, by provinces, and Newfoundland. Central American countries. Mexico. United States—states and territories.

Note: A useful directory of geological source materials and services. The work is intended for the guidance of geologists—especially petroleum geologists—who are practicing their profession anywhere in North America.

LANDES KENNETH KNIGHT, AND RUSSELL C. HUSSEY

Geology and man New York Prentice-Hall, Inc. 1948 518 p illus. 24 cm. $6 45 398

Contents: Part I, Introduction The science of geology. Earth materials. Part II, Geologic processes Work of the atmosphere. Ground water Running water. Ice as a geologic agent. Direct action of gravity Oceans and lakes. Sedimentary rocks. Volcanism and igneous rocks. Diastrophism and its effects. Part III, Beneath the crust. The earth's interior Part IV Earth history: Origin and age of the earth. The study of earth history The history of life on the earth. The geologic story of the earth. Part V Practical applications: The search for mineral deposits. Geology in engineering projects. Index.

Note: A textbook for use in introductory courses in colleges. Physical geology is emphasized but material is included from other branches also. The subject is made especially interesting by emphasis on the effects of geological processes on man. Gradual processes such as erosion, soil formation, and the movement of ground water are discussed, and in addition there is a good deal of description of catastrophic processes such as floods, hurricanes, and earthquakes. There are 188 figures, many of which are reproductions of photographs. The senior author's *Physical geology and man*, New York: Prentice-Hall, Inc., 1948, 414 p., $4.50, is an abridged version of the same work with the material on historical geology omitted.

LEET LEWIS DON

Causes of catastrophe earthquakes, volcanoes, tidal waves and hurricanes. New York Whittlesey House, McGraw Hill Book Company Inc., 1948 232 p. illus. 21 cm. $3.25 399

Contents Calculation of catastrophe. Earthquakes. Volcanoes. Mountain making as the cause of earthquakes and volcanoes. Mountain making and volcanoes in the Pacific. Tidal waves. Hurricanes and typhoons. Geophysical tables—Atlantic to eastern. Index.

Note: The numbers of mankind who come to untimely ends from catastrophes of nature such as are described in this book must be infinitesimal in comparison to the numbers who meet sudden death in other ways. Nevertheless, earthquakes, volcanic eruptions and the like are perennially interesting. The author of this book, seismologist on the faculty of Harvard University examines these convulsive manifestations of nature with the eyes of a scientist but writes about them for the general reader His work is fascinating but not sensational.

NICKLES, JOHN MILTON, AND OTHERS

Bibliography and index of geology exclusive of North America. Volume 10, 1943/1944 By John M Nickles Marie Siegrist, Eleanor Tatge. New York The Geological Society of America, 1946 203 p 26 cm. $1.80 400

—— Volume 11 1945/1946 By Marie Siegrist and Eleanor Tatge. New York The Geological Society of America, 1947 474 p 26 cm. $3.25 401

—— Volume 12 1947 By Marie Siegrist and Eleanor Tatge. New York The Geological Society of America, 1948 359 p. 26 cm. $3.50 402

Note: (1047b) A standard annual guide to the geological literature of the world exclusive of the literature bearing on the geology of North America, which is covered by the United States Geological Survey's *Bibliography of North America* described below The arrangement is by author with a detailed subject index. Most of the entries are accompanied by a short annotation which describes the scope or content of the article.

THOM EMMA MERTINS

Bibliography of North American geology 1942 and 1943 1944 and 1945 Washington D C. Government Printing Office, 1946–47 2 v 23 cm. (United States. Geological Survey Bulletin 949 952) Paper $0 70 $1 00 403

Note: (1048a, 1048b) These two volumes are continuations of the bibliographies covering 1929–1939 and 1940–1941 of the same compiler and title. For the years covered they list the same types of material as the basic volume, including economic geology historical geology mineralogy paleontology petrology, physical geology and physiographic geology The papers, with full title and medium of publication, are listed under the names of their authors, which are arranged in alphabetic order The author lists are followed by detailed subject indexes to the literature cited. An errata sheet (734433) listing eight corrections in the 1929–39 1940–41 and 1942–43 volumes was issued in 1946; these errata are also printed on p. 495–496 of the 1944–45 volume.

GEOLOGY OF VARIOUS REGIONS

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Appalachian basin Ordovician symposium. Papers read at the meeting of the Pittsburgh Geological Society at Pittsburgh, Pennsylvania, May 16 1947, and published in the Bulletin of the American Association of Petroleum Geologists, August, 1948 Editorial

use of these curves and an explanation of the methods used in their derivation are included. The calculations and the experimental verifications of them were done under the auspices of the Sonar Design Section of the Bureau of Ships, U.S. Navy and the work was published originally by the Department of Commerce in 1945 as P.B. Report 22410.

HEISING, RAYMOND ALPHONSUS, editor
Quartz crystals for electrical circuits, their design and manufacture. New York D Van Nostrand Company Inc., 1946 563 p illus. 24 cm. $6 50 394

Contents: Introduction, by R. A. Heising. Quartz crystal applications, by W P Mason. Methods for specifying quartz crystal orientation and their determination by optical means, by W. L. Bond. The use of X-rays for determining the orientation of quartz crystals, by W L. Bond and E. J Armstrong. Raw quartz, its imperfections and inspection, by G. W Willard. Use of the etch technique for determining orientation and twinning in quartz crystals, by G. W Willard. Modes of motion in quartz crystals, the effects of coupling and methods of design, by R. A. Sykes. Theoretical analysis of modes of vibration for isotropic rectangular plates having all surfaces free, by H. J McSkimin. Principles of mounting quartz plates, by R. A. Sykes. Sawing, grinding and lapping, by W L. Bond. Adjusting to frequency by G. M. Thurston. Metal electrodes deposited on quartz crystals by the evaporation process, by H. W Weinhart and H. G. Wehe. Piezoelectric crystals in oscillator circuits, by L. E. Fair. The mounting and fabrication of plated quartz crystal units, by R. M. C. Greenidge. Effects of manufacturing deviations on crystal units for filters, by A. R. d'Heedene. The measurement of the performance index of quartz plates, by C. W Harrison. The wire mounted crystal unit, by W P Drews and A. E. Swickard. Low frequency quartz crystal cuts having low temperature coefficients, by W P Mason and R. A. Sykes. Index.

Note The greater part of this book originated as lectures that were prepared to explain the techniques of quartz crystal design and manufacture to engineers and other technical personnel of the Western Electric Company Here the lectures have been revised and supplemented to make an extensive presentation of both the theoretical and practical aspects. Specific details of production processes together with illustrations of machines used in manufacturing are given in several of the chapters.

WYCKOFF RALPH WALTER GRAYSTONE
Crystal structures. Section 1. New York Interscience Publishers, Inc., 1948 [504 p.] illus. 26 cm. $8 00 395

Contents: Preface and introduction. Inorganic structures: Structures of the elements. Structures of the compounds RX. Structures of the compounds RX_2. Structures of complex binary compounds, R_nX_m. Structures of the compounds $R(MX_3)_n$. Compounds of the type $R_n(MX_4)_p$.

Note: A reference work of considerable importance in the field of crystallography It supersedes the author's *The Structure of crystals*, second edition *New York*, 1931–34 and is designed to serve essentially the same purpose. However this work is published in loose-leaf form and is so arranged that it can readily be kept up to date. Each of the chapters has four parts: Text; Tables; Illustrations; Bibliography In the Text portion information on the group, subgroups, and individual substances that does not lend itself to tabular presentation is given. The Illustrations portion contains diagrams and illustrations of molecular models of selected substances.

ZACHARIASEN, WILLIAM HOULDER
Theory of X-ray diffraction in crystals. New York John Wiley & Sons, Inc., 1945 255 p illus. 22 cm. $4.50 396

Contents: The nature of crystals. The symmetry of crystals. Theory of X-ray diffraction in ideal crystals. X-ray interference in real crystals. Appendix A: Dyadics. Appendix B Elements of group theory Index.

Note Both the theory of space lattices and their symmetry properties as well as the theory of X-ray diffraction in crystals are discussed in this advanced textbook for graduates of physics and chemistry Higher mathematics, including vector analysis, is prerequisite. Some of the material is based on the author's original researches. Bibliographic references to additional material on crystal structure are given at the end of most chapters and in occasional footnotes.

The Cambrian deposits studied are limited to the three lower formations, namely the Tapeats, Bright Angel, and Muav. The second part of the publication is the result of a detailed and comprehensive study of the faunas of the same formations and presents descriptions of new species and a review of those already described.

UNITED STATES. GEOLOGICAL SURVEY

Geologic investigations in American republics 1947 Washington, D. C. Government Printing Office, 1948 5 parts, paged continuously p. 1–175 illus 23 cm. (United States. Geological Survey Bulletin 960 parts A–E) Paper, $0 75 $1 00, $1.50 $0.50 $0.55 respectively 410

Contents. Barite deposits of Camamu bay, state of Bahia, Brazil, by A. J. Bodenlos. Antimony deposits of Soyatal district, state of Querétaro, Mexico, by Donald E. White. Geology of tungsten deposits in north-central Chile, by James F McAllister and Carlos Ruiz F Tin-bearing placers near Guadalcázar state of San Luis Potosí, Mexico, by Carl Fries, Jr and Eduardo Schmitter Geology of the Huahuaxtla mercury district, state of Guerrero, Mexico, by David Gallagher and Rafael Pérez Siliceo.

Note: The most recent in a series now published annually in several parts. The investigations have been carried out under the auspices of the Interdepartmental Committee on Scientific and Cultural Cooperation of the United States Department of State in cooperation with the governments of the Latin American republics. The first such bulletin was no. 935, which covered the investigations for the years 1941–43.

WANLESS, HAROLD ROLLIN

Pennsylvanian geology of a part of the southern Appalachian coal field. New York The Geological Society of America, 1946. 162 p. illus. 25 cm. (The Geological Society of America. Memoir 13) $3 90 411

Contents (abridged) Abstract. Part I, Introduction. Part II, General characteristics of the southern Appalachian coal field. Topography Structure. Part III, Previous studies of Pennsylvanian stratigraphy Part IV Strata of Lee age. Part V Pennsylvanian strata younger than the Lee. Part VI, Deposition of southern Appalachian coal measures. Part VII, Problems deserving further study in the southern Appalachian coal field. Part VIII, Glossary and index of stratigraphic names. References cited. Index.

Note. A stratigraphic study based on field work by the author aimed at clarifying the details of a geologically complex area. Lithologic descriptions of the formations studied are included, and a collection of plates showing geologic sections throughout the area is provided. Geologists and geology students will be the principal users.

WASHBURN, ALBERT LINCOLN

Reconnaissance geology of portions of Victoria Island and adjacent regions, Arctic Canada. New York The Geological Society of America, 1947 142 p illus. 25 cm. (The Geological Society of America. Memoir 22) $4.00 412

Contents: Geography Stratigraphy—Ordovician. Structure. Economic geology Glaciation. Deglaciation. Geomorphic processes. Appendices: Stress observations in the Canadian Arctic (tables 1–9). Mollusks from Victoria Island and adjacent regions (table 10) References cited. Index.

Note: A discussion of what is currently known about the geology of the Victoria Island area. The work is based on a survey of the related literature and on field work by the author. Most of the monograph deals with descriptions of terrain features and with accounts of the particular geological processes believed to have been responsible for their formation. The volume is directed at geologists —principally geomorphologists, but its content, in part at least, should render it of some military value as well

WOODRING, WENDELL PHILLIPS AND OTHERS

Geology and paleontology of Palos Verdes hills, California, by W P Woodring, M N Bramlette, and W S. W Kew Washington D C. Government Printing Office, 1946. 145 p illus 29 cm. (United States. Geological Survey Professional paper 207) Paper $1.50 413

Contents. Introduction. Bibliography. Geography Stratigraphy and paleontology: Outline of stratigraphy Jurassic (?) system. Miocene series. Pliocene series. Pleistocene series. Pleistocene to recent series. Basaltic rocks of Miocene age. Structure. Physiography Mineral resources. Fossil localities. Index.

Note. This report, part of a series of publications dealing with the geology of areas within and bordering the Los Angeles basin, describes the geology paleontology and mineral resources of the Palos Verdes hills otherwise, but incorrectly known as the San Pedro hills. The strata that crop out in the hills are penetrated in oil fields in the southern part of the Los Angeles basin, and special emphasis in the report is given to data that may aid in studying the subsurface section in the basin. Oil in commercial quantities has not so far been found in the Palos Verdes hills. The illustrations include folding maps and plates.

MINERALOGY AND PETROLOGY

DEMILLE, JOHN B

Strategic minerals a summary of uses, world output, stockpiles procurement. New York McGraw Hill Book Company Inc., 1947 626 p 23 cm. $7.50. 414

Contents (abridged) Introduction. Bibliography. Reviews of strategic minerals and metals Aluminum. Antimony ore. Apatite. Arsenic. Asbestos. Barite and lithopone. Bauxite. Beryllium. Bismuth ore. Cadmium. Calcium and calcite. Chalk. China clay bentonite, and fire clay Chromium ore. Cobalt. Columbite. Copper Corundum. Cryolite ore. Diamonds (industrial) Emery ore. Feldspar Fluorspar. Graphite. Indium. Iodine. Iridium. Iron and steel. Kyanite (Indian). Lead. Lithium minerals. Magnesite. Magnesium. Manganese ore. Mercury Mica. Molybdenite. Monazite sand. Nickel. Nitrogen compounds. Osmium and osmiridium. Palladium. Platinum ore. Potash. Quartz crystal and plastic optics. Rhodium. Ruby Ruthenium. Sapphire. Selenium. Sillimanite. Silver Sodium. Strontium ore. Sulfur and pyrites. Talc. Tantalum. Tin. Titanium. Topaz. Tungsten ore. Uranium. Vanadium ore. Zinc Zirconium ore and baddeleyite. Index.

Note. A useful compilation of data relating to seventy-six metals and minerals which assumed great importance during the past war and are vital to the industrial development of a country Each mineral is discussed as to properties, uses (particularly in relation to war industries) domestic sources of supply and production, world production, and prices. Selected bibliographies, which include technical works on metallurgy as well as economic studies, are given at the end of each section. The lengthy introduction traces the history of mineral production during the war years and the steps taken by the government to insure maximum production.

GILLULY JAMES

Origin of granite. (Conference at meeting of the Geological Society of America held in Ottawa, Canada, December 30 1947) New York The Geological Society of America, 1948 136 p illus. 25 cm. (Geological Society of America. Memoir 28) $1.80 415

Contents: Granites and granites, by H H Read. Origin of granitic rocks of the northwest Adirondacks, by A. F Buddington. Origin of granite, by F F Grout. Origin of granites, by G E. Goodspeed. The granite problem, and the method of multiple prejudices, by N L. Bowen.

Note. The papers and discussion in this volume are the result of an experiment planned by the Society to focus attention on some of the unsolved problems in geology Some of the hypotheses put forth are that granite was formed by the cooling of magmas by replacement by migmatization and metasomatism, and by the metamorphism. Most of the scientists agreed that granite may be formed by different processes, but there was no agreement on the origin of most granite masses. The discussions are reported in full; and the literature of the problem is freely cited. Altogether, the work constitutes a comprehensive survey of the granite problem as it stands today

GRAVES, HOWARD BRADLEY

The mineral key New York McGraw Hill Book Company Inc. 1947 178 p. 18 cm. $4 00 416

Contents. Introduction. Equipment and chemicals needed. Methods of identification physical properties—chemical tests—specific tests for the elements—identification tables. Species index. Index.

Note. As the title indicates, this little manual is intended to serve as a handy guide to the identification of mineral specimens. Written primarily for the amateur mineral collector it includes only those species most likely to be encountered. Brief descriptions of methods for making physical and chemical tests precede a tabulation of the physical properties and confirmatory tests for 423 minerals. The book will also be of value to prospectors and professional mineralogists who may not have access to laboratory facilities, for the suggested equipment is inexpensive or readily improvised; and the simple chemicals required are limited to those useful in maximum number of tests.

KERR, PAUL FRANCIS

Tungsten mineralization in the United States. New York The Geological Society of America, 1946 241 p illus. 25 cm. (Geological Society of America. Memoir 15) $3 00 417

Contents: Abstract. Part I, Nature and origin Introduction. Structural control. Related igneous activity Genesis of tungsten deposits. Types of deposits. Tungsten-bearing minerals. Part II, Tungsten occurrences in the United States: Introduction. The western Cordillera. East of the Rocky Mountains. Bibliography Index.

Note. Essentially this book is a summary of data derived from the literature and field studies of a large number of occurrences known up to 1942. Supplementary comments of more recent data have been added, although accounts of war-time discoveries are not completely covered. The primary purpose of the author was to provide a background for a better understanding of the principles of tungsten mineralization and distribution. Occurrences in the western Cordillera are described in 119 pages, those east of the Rocky Mountains, only one of which is productive, in 12 pages.

PARDEE, JOSEPH THOMAS, AND C F PARK, JR.

Gold deposits of the southern Piedmont. Washington D C. Government Printing Office, 1948 156 p illus. 29 cm. (United States. Geological Survey Professional paper 213) Paper $6 50 including *portfolio of maps* plans and sections. 418

Contents. Introduction. Bibliography Geography General geology Physiography History of mining Production. Gold deposits. Distribution. Classification Lode deposits. Placer deposits. Mine descriptions Virginia mines. North Carolina mines. South Carolina mines. Georgia mines. Alabama mines. Index

Note This report is concerned with the gold mines in the southern Appalachian gold belt, which stretches ten to one hundred miles wide along the southeast front of the Appalachian Mountains from Virginia to Alabama. The gold deposits have been divided for purposes of description into two main groups—lodes and placers. Under the heading Mine Descriptions, brief accounts are given of a large number of mines and prospects, and a few extensively developed deposits are described in detail. The geology of the region is described only in so far as the geology seems likely to shed light on the extent of the gold deposits and their possibilities for future production. With the paper comes a box of large folding maps and plans.

PIRSSON LOUIS VALENTINE

Rocks and rock minerals Third edition revised by Adolph Knopf New York John Wiley & Sons Inc., 1947 249 p illus. 22 cm. $4 00 419

Contents: Part I Introductory and general Scope of petrology; history; methods of study Chemical composition of the earth's crust and its component minerals. Part II Rock minerals: Important properties of minerals. The rock-making minerals. Determination of rock minerals. Part III, Rocks: General petrology of igneous rocks. Classification of igneous rocks. Description of igneous rocks. Origin and classification of sedimentary rocks. Description of detrital sedimentary rocks. Descriptions of sedimentary rocks, mainly nondetrital. Origin and classification of metamorphic rocks. Description of metamorphic rocks. Determination of rocks. Index.

Note Since the publication of the first edition (1908) this work has been known as a reliable and convenient manual of the main elements of petrology including megascopic (but omitting microscopic) petrography It has been extensively used both as a field manual by amateur collectors and professional geologists, and as a textbook in college courses. The scope of the work has not been changed in the present edition, but the text has been revised, rearranged, the type reset. Some parts of the original text have been condensed, new information on chemical analyses has been added, and there are changes in terminology and classification.

SMITH ORSINO CECIL

Identification and qualitative chemical analysis of minerals. New York D Van Nostrand Company Inc., 1946 351 p. illus. 23 cm. $6 50 420

Contents. Introduction. Ultra-violet light and mineral fluorochemistry Mineral chemistry Tables of chemical reactions. Qualitative chemical tests. The flame and its use in blowpiping. Tables for mineral identification. General index. Mineral index.

Note This very well-organized manual is an expansion of the author's *Mineral identification simplified*, Los Angeles: Wetzel, 1940 (1149) Although no attempt is made to teach the principles of qualitative analysis, the first part of the book covers the chemical and blowpipe methods of mineral determination. However, since the mineral identification system is largely based on the specific gravity and hardness of minerals, detailed instructions are given for finding these two properties, and the main portion of the book is devoted to identification tables in which the minerals are grouped in order of decreasing specific gravity and decreasing hardness. Colored plates of the minerals accompany the tables. For those wishing to construct a portable laboratory detailed drawings and instructions are given.

TURNER, FRANCIS J

Mineralogical and structural evolution of the metamorphic rocks Washington The Geological Society of America, 1948 342 p illus. 25 cm. (Geological Society of America. Memoir 30) $3 00 421

Contents. Scope of metamorphism. Chemical adjustment of solid rocks to temperature, pressure, and shearing stress. Metamorphic zones The phase rule and metamorphic facies. Characteristics of the principal metamorphic facies. Metasomatism in metamorphism. Metamorphic differentiation. Some general characteristics of the fabric of metamorphic rocks. Fabric of deformed rocks: I, Development of slip surfaces during deformation of rocks—II, The basis of petrofabric analysis—III, Some typical patterns of preferred orientation. Experimentally established data relating to plastic deformation of crystalline materials and evolution of tectonite fabrics. Mechanism of development of tectonite fabrics in metamorphic rocks. Some special problems of regional metamorphism. Bibliography Index.

Note. This technical presentation of current views on petrogenesis of metamorphic rocks is intended to assist advanced students and research workers in the field The application of the mineralogical phase rule to rocks is discussed, along with those factors which condition its use; and from this base the author formulates a facies classification for metamorphic rocks. The differences between metamorphic and igneous or sedimentary rocks are pointed out, and the fabric of metamorphic rocks is reviewed in detail. The views of Eskola, whose *Die Entstehung der Gesteine*, Berlin, 1939 had not been widely circulated in the United States and Great Britain when the manuscript of the present work was completed in 1944, are referred to frequently. The bibliography covers the pertinent literature through about 1944.

WAHLSTROM ERNEST E.

Igneous minerals and rocks. New York John Wiley & Sons Inc., 1947 367 p. illus. 22 cm. $5 50 422

Contents. Part I, Igneous minerals Introduction. Optical examination of rock-making minerals. Supplementary methods for examining minerals in igneous rocks. Minerals in igneous rocks. Tables

for mineral identification. Part II, Igneous rocks: Geological occurrence of igneous rocks. Structure, texture, color and alterations. Chemical composition and classification. Mineral composition and classification. Descriptions of igneous rocks. The microscopic identification of igneous rocks. Index.

Note: The emphasis in this textbook is on the use of the petrographic microscope for examination and identification of igneous rocks and the minerals that form them. Although the work is designed for beginners in petrology prior knowledge of optical crystallography is assumed. Much data constantly needed by students, such as definitions of petrologic terms, the behavior of light in passing through mineral slices, and the comparison of rock classification schemes, are presented in readily usable form. There is, however no systematic description of rocks from the standpoint of specific localities. A few footnote references to the related literature are given. The approximately 133 reproductions of rock photographs and photomicrographs are unusually informative.

WELLS ROGER CLARK, AND OTHERS

Contributions to geochemistry 1942–45 Short papers by R. C. Wells and others. Washington D C. Government Printing Office, 1946 161 p illus. 23 cm. (United States. Geological Survey Bulletin 950) Paper $0 40 423

Contents: Foreword, by R. C. Wells. Analyses of petroleum-coke ashes, by R. C. Wells. Studies on the peroxide method for determining vanadium in minerals and ores, by M. D Foster Separation of small amounts of chromium from vanadium with ethyl acetate, by M. D. Foster. A field test for vanadium, by J. M. Axelrod. Significance of internal structure in substituting silicate minerals, by K. J. Murata. Symmetrical arrangement of atoms in aluminosilicates and random arrangement of two kinds of objects in regular array, by W. G. Schlecht. A study of methods for the determination of vanadium, by V North. Determination of beryllium in ores, by R. E. Stevens and M. K. Carron. A system for calculating analyses of micas and related minerals to end members, by R. E. Stevens. Composition of roscoelite, by R. C. Wells and W W Brannock. A field test for the detection and estimation of tungsten, by V North and F S. Grimaldi. An easily cleaned mounture for powders used in spectrography, by C. Feldman. Gravimetric determination of tungsten with brucine, by F S. Grimaldi and N Davidson. A volumetric method for the determination of carbon dioxide, by J. J Fahey Gamma-ray studies of potassium salts and associated geologic formations, by H. C. Spicer Index.

Note. A series of papers on some of the methods developed and the results obtained from investigations made during the war years by geochemists in the Chemical Laboratory of the Geological Survey. The search for rare strategic and critical minerals in other ores that were either rare or abundant led to complicated and difficult tests and chemical analyses and to increased use of new methods, some of which are described in this bulletin.

GEMOLOGY

DAKE HENRY CARL, AND RICHARD M PEARL

The art of gem cutting. Third edition. Portland, Ore. Mineralogist Publishing Company 1945 128 p illus. 23 cm. $1.50 424

Contents (abridged): Gem cutting as hobby Part I, Cabochon cutting. Part II, Facet cutting: Orientation—shaping. Polishing facets. Part III, Gemology: Optics of gems. Lapidary use of optical properties. Crystal structure. Chemical composition. Physical properties. Testing gems. Optical instruments. Chemicals. Value of gems. Part IV Special lapidary technic.

Note: An instruction book for the amateur gem cutter. The information given covers details of the tools and equipment required, and of their uses. The third edition was prepared to bring the work up to date by including new developments such as the diamond saw.

KRAUS EDWARD HENRY AND CHESTER BAKER SLAWSON

Gems and gem materials Fifth edition. New York McGraw Hill Book Company, Inc. 1947 332 p. illus. 23 cm. $4.00 425

Contents: Introduction. Part I Crystal forms. Physical properties. Optical properties Crystal structure and X-ray methods. Chemical properties. Formation and occurrence of gem minerals. Cutting and polishing of gems. The naming of gems. Manufactured gems. Metals used for gem mountings. Part II: Description of individual gems. Part III Classification of gem materials, according to various properties. Selected bibliography Index.

Note: (1141) This work, which provides compact but authoritative review of information on both crude and cut gems, has been standard text and manual since the publication of the first edition in 1925. Compared to the fourth edition, this edition contains newly added material on gem-cutting machinery the evaluation of cut diamonds, new gem materials, and recent progress in the making of synthetic gems. A new chapter on crystal structure discusses the Laue, Bragg, powder and oscillation methods of determining the internal structure of crystals.

LIDDICOAT, RICHARD THOMAS

Handbook of gem identification with a foreword by Edward H Kraus. Los Angeles Gemological Institute of America, 1947 283 p illus. 21 cm. $4.50 426

Contents. Introduction. The nature of gemstones. Cleavage, fracture, and hardness. Specific gravity Refractive index determination. Double refraction, pleochroism and optic character Magnification. The use of characteristic imperfections as means of gem identification. Color filters and fluorescence. Synthetic gemstones. Doublets, triplets, foil backs, and imitations. Pearls, cultured pearls and imitations. Instruments essential to gem testing. A procedure for the identification of gemstones and their substitutes. The identification of transparent purple and violet gemstones and their substitutes. The identification of transparent blue gemstones and their substitutes. The identification of transparent green gemstones and their substitutes. The identification of transparent yellow gemstones and their substitutes. The identification of transparent brown and orange gemstones and their substitutes. The identification of transparent pink and red gemstones and their substitutes. The identification of transparent colorless gemstones and their substitutes. The identification of nontransparent blue gemstones and their substitutes. The identification of nontransparent red, yellow, and brown gemstones and their substitutes. The identification of nontransparent white, gray and black gemstones and their substitutes. Appendix. Glossary Index.

Note. Designed for jewelers and others dealing in gemstones, this is more advanced manual of testing procedures than Webster and Hinton's *Introductory gemology* (Los Angeles Gemological Institute of America, 1945) An important feature here is the detailed plan for identifying unknown stones in each of the different colors in which important gems occur A table of properties for gemstones and their substitutes is included; also short glossary

PEARL RICHARD MAXWELL

Popular gemology New York John Wiley & Sons Inc. 1948 316 p. illus. 21 cm. $4 00 427

Contents: The lure of gems. Recognizing gems. Faceted gems. Cabochon and carved gems. Gems of the silica group. Gems with gemology Man-made gems. Luminescent gems. Selected reading. Index.

Note: The information in this work is well selected, clearly presented and reliable. Persons interested in only one variety or family of gems may feel that the treatment of it is too concise to be satisfactory but the book will serve well as general introduction to the subject and also as an elementary reference book. There are 115 black-and-white illustrations, most of which are clear reproductions of photographs, but no colored illustrations.

SHIPLEY ROBERT MORRILL AND OTHERS

Dictionary of gems and gemology including ornamental, decorative and curio stones. A glossary of over 4000 English and foreign words, terms and abbreviations which may be encountered in English literature or in the gem, jewelry or art trades By Robert M. Shipley, assisted by Anna McConnell Beckley Edward Wigglesworth, and Robert M. Shipley Jr Fourth edition. Los Angeles

Gemological Institute of America, 1948 261 p. 20 cm. $5.50 428

Note. In this reference book terms of interest in the jewelry trade and in amateur collecting are defined. In addition to definitions of the names of precious and semi-precious stones and other terms that are frequently used in the trade much useful supplementary information is included. This includes descriptions of famous gems identifications and descriptions of museums, societies, laboratories of interest in connection with gems and capsule biographies of persons who have contributed to the knowledge of gems. In this edition minor corrections have been made and enough new terms added to increase the book's length by about three pages.

WILLEMS, J DANIEL

Gem cutting. Peoria, Ill. The Manual Arts Press, 1948 224 p illus. (part col'd) 23 cm. $3.50 429

Contents Foreword, by Edward H. Kraus. Introduction. Gem materials. The art of cutting and polishing. The technique of sawing The technique of rough grinding. The technique of dopping. The technique of finish grinding. The technique of sanding. The technique of polishing. The technique of undopping and cleaning Facet-cut gems. The optical properties of gem materials. Forms and types of facet cuts. Preliminary practice in cutting facets. The study of the gem crystal and its orientation for cutting. Sawing and roughing-out the gem crystal for facet cutting. The traditional and the modern dopping and holding devices. The Willems faceting device. The technique of dopping for cutting facets The technique of facet cutting. The technique of polishing facets. Special lapidary techniques. Diamond cutting. Absolute minimum requirements for beginner's shop. Bibliography Index.

Note The author of this book (who is also the inventor of the Willems faceting device) is well known as an outstanding amateur lapidary Here he has given detailed, practical directions for all the operations of interest to amateur gem-cutting Many chapters contain also list of don'ts" that will save the average amateur much grief.

DYNAMIC AND STRUCTURAL GEOLOGY

CLOOS ERNST

Lineation a critical review and annotated bibliography New York The Geological Society of America 1946 122 p illus. 25 cm. (Geological Society of America. Memoir 18) $1.80 430

Contents Usage of lineation. Definitions. Observation of lineation. Terms used. Kinds of lineation. Age relations of lineations Orientation of lineation. Fabric analysis and lineation Analyses of lineation Summary and conclusions. Literature analyses Annotated bibliography Author index. General index.

Note. The author shows that by careful study of the flow pattern in deformed rocks the direction of movement of the deforming force can often be ascertained. He shows that the kinds of lineation described in the literature can be classified in six genetic types. Mining engineers and structural geologists will be able to apply the information in this monograph in solving the problems of ore location for mines situated in geologically complex areas.

FLINT RICHARD FOSTER

Glacial geology and the Pleistocene epoch. New York John Wiley & Sons Inc. 1947 589 p illus. 23 cm. $6 00 431

Contents The roots of the basic concepts. Glacier ice and glacier motion. Regimen of glaciers Form and distribution of existing glaciers. Glacial erosion and transport. Glacially sculptured landscapes. Glacial drift—till—moraines—stratified drift. Expansion and shrinkage of glaciers inferred from drift. Glacial drainage, ice-thrust features, and eolian deposits. Glacial stratigraphy Glaciation of North America in the Wisconsin age. Wisconsin stratigraphy of North America. Pre-Wisconsin stratigraphy of North America. The former glaciers of Europe. Glacial stratigraphy of Europe. Glaciation outside North America and Europe. Pleistocene chronology Changes in level of land and sea. Glacial and interglacial climates. Climates since the maximum of the fourth glacial age. Causes of the climatic fluctuations. The fossil record. References. Index.

Note. A compact, critical summary of the accumulated knowledge of the geological processes, particularly glaciation, of the Pleistocene epoch. The later chapters contain an extended discussion of the knowledge of the climates and very brief discussion of the flora and fauna in relation to the glacial cycles. The work is beyond doubt the outstanding presentation of modern glacial theory and glacial geology Although it is of interest to college students specializing in geology it is not primarily textbook, but is instead review and reference manual for scientists in such fields as geology ecology and archaeology The author states that the bibliography is representative rather than comprehensive however, there are approximately 1200 references to the international literature.

HUSSEY, RUSSELL CLAUDIUS

Historical geology the geologic history of North America. Second edition. New York McGraw Hill Book Company Inc., 1947 465 p illus. 23 cm. $3 75 432

Contents Introduction. The origin of the earth. Organizing the geologic record. Fossils reveal the life of the past. The concept of evolution. The Archeozoic era. The Proterozoic era. The Paleozoic era (the Cambrian period) The Paleozoic era (the Ordovician period). The Paleozoic era (the Silurian period) The Paleozoic era (the Devonian period) The Paleozoic era (the Mississippian period) The Paleozoic era (the Pennsylvanian period) The Paleozoic era (the Permian period) The Mesozoic era (the Triassic period) The Mesozoic era (the Jurassic period) The Mesozoic era (the Cretaceous period) The Cenozoic era (the Tertiary period) The Cenozoic era (the Pleistocene epoch) Life of the Cenozoic. The geologic history of man. Index.

Note. (1080) Already well known as concise but clear survey of its subject, suitable for cultural reading as well as classroom use this book now appears in second edition. Comparison with the first edition (1944) shows that although there are no major changes, many small revisions have been made There are some slight rearrangements in the order of chapters and occasional alterations of paragraph or sentence. A number of small tables on the various stratigraphic formations have been omitted, and several drawings and photographs, especially drawings of historic vertebrates, have been added. Other changes include revised discussion of Triassic reptilian mammals, and the addition of brief descriptions of the newly discovered *Pithecanthropus robustus*, *Meganthropus palaeojavanicus*, and *Gigantopithecus blacki*.

LONGWELL CHESTER RAY, AND OTHERS

Physical geology, by Chester R. Longwell, Adolph Knopf and Richard F Flint. Third edition New York John Wiley & Sons, Inc., 1948 602 p illus. 23 cm. $5 00 433

Contents: Geology the science of the earth. The method and scope of geologic study Weathering and its part in erosion. Mass-wasting at the earth's surface Running water Sculpture of the land by streams and mass-wasting. Subsurface water. Lakes and swamps. Glaciers and glaciation. Erosion and deposition by wind. Marine erosion and deposition. Sedimentary rocks. Igneous rocks. Volcanoes and volcanism. Deformation of the earth's crust. Earthquakes. Metamorphism. The earth's interior. The origin and history of mountains Land forms. Mineral resources. Appendices. Index.

Note. (1081) An outstanding text that has been widely used in college courses since the publication of the first edition in 1932 It is commonly referred to as "The Yale geology" since the authors are members of the faculty of Yale University A considerable number of changes have been made in this edition. The second chapter is new various parts of other chapters have been rewritten or expanded and many of the illustrations that appeared in the earlier editions have been replaced with better ones No colored plates are used in the text, but set of Kodachrome slides to accompany it in teaching is available from the publisher

SHROCK ROBERT RAKES

Sequence in layered rocks a study of features and structures useful for determining top and bottom or order of succession in bedded and tabular rock bodies. New York McGraw Hill Book Company Inc., 1948 507 p. illus. 23 cm. $7.50 434

Contents: Introduction. Cross relationships. Features of sedimentary rocks. 1, Lithological—textural—mineralogical sequences. 2,

Features on upper- and undersurfaces of sedimentary beds. III, Internal features. Features of igneous rocks. Features of metamorphosed rocks. Bibliography Index.

Note: A description of the principles and methods utilized in determining the order of succession of bedded and layered rocks where the strata are steeply inclined or vertical. The book is planned for use as text by advanced geology students, and as manual of practical information for practicing geologists. It is for the latter group, particularly the petroleum and mining geologists, that the author has included detailed discussions of rock features and structures, and numerous photographs and diagrams of layered rocks. The references scattered throughout the text are keyed to the thirty-page bibliography

SHULER, ELLIS WILLIAM

Rocks and rivers. New York The Ronald Press Company 1945 300 p. illus. 24 cm. (Humanizing science series Jaques Cattell editor) $4.00 435

Contents: A personal foreword. Earth stuff. The landscape has multiple origin. Carving the crust. Removing the waste. The soils. The sculptured lands. Springs. Caves, sinkholes, and natural bridges. Wave and shore. The volcanic landscape. Perched boulders reveal an age of ice. How the rivers crossed the ridges. Lakes, waterfalls, and canyons. Mountains. The economic landscape. Time and change. Appendices: The landscape in art—Photographing the landscape. Index.

Note: An outstanding popular account of physical geology. The author himself an eminent geologist, has written the book from the viewpoint of traveller without education in geology and not interested in studying it as science but interested instead in understanding the landscape he sees. It is almost entirely free of scientific jargon and is not only easy to read but also interesting.

THE SOCIETY OF EXPLORATION GEOPHYSICISTS

Cumulative index of the publications of the Society of Exploration Geophysicists. Tulsa, Okla. The Society of Exploration Geophysicists, 1948 127 p 24 cm. Paper $1.50 cloth, $2.50 436

Contents: Editorial note. Publications of the Society of Exploration Geophysicists. Officers of the Society of Exploration Geophysicists. Technical and editorial index—By authors—Index by subjects—Exploration, General—Seismographic—Gravimetric—Magnetic—Electrical—Geochemical—Well measurements—Case histories—Miscellaneous—Reviews and new publications. Society round table section. Cumulative index of contents by volumes and numbers. Index of patent abstracts.

Note. A record of the literature published 1931–1947 by The Society of Exploration Geophysicists on the subject of geophysical prospecting. The present listing supersedes the previous one of 1940 which contained neither the index of patents nor the classification by subject. The volume has been published for the convenience of geologists and geophysicists—particularly those engaged in the search for new deposits of petroleum.

THOMPSON, HENRY DEWEY

Fundamentals of earth science. New York D Appleton-Century Company Inc., 1947 461 p illus 23 cm. (The Century earth science series, Kirtley F Mather editor) $3 75 437

Contents: Editor's introduction. Scope, methods and historical development of earth science. The earth as planet. Origin and age of the earth. General composition, structure and processes of the earth. Maps, diagrams and photographs. The elements of weather and climate. Climatic controls. Climatic types. Weathering. The work of streams. The cycle of stream erosion. Ground water. Glaciers and glaciation. Wind work. Lakes and swamps. The ocean and its shores. Minerals. Volcanism. Igneous rocks. Sedimentary rocks. Metamorphism and metamorphic rocks. Movements and structures of the lithosphere. Earthquakes. Landforms. A short sketch of earth history. Useful aspects of earth science. Appendix: Subdivisions of earth science. Publications dealing with earth science. Index.

Note: A college textbook designed for one-semester freshman course and intended to acquaint the student with the natural processes that are responsible for the structure of the earth and the changes that are constantly taking place in its physical aspects. In addition to geology and physical geography basic ideas in meteorology climatology oceanography geomorphology mineralogy and geophysics are discussed in this connection. Commonly accepted, up-to-date knowledge is presented in clear straight-forward manner suitable for beginners but with no effort to popularize or to catch the attention of the layman.

WORCESTER, PHILIP GEORGE

A textbook of geomorphology Second edition New York D Van Nostrand Company Inc., 1948 548 p. illus. 24 cm. $5.25 438

Contents: Introduction. Relief of the earth. Relations of earth and sea. Materials of the lithosphere—rocks. Earth movements and structures. Preparing the land for erosion—rock weathering. Topography produced by streams in humid regions. Topography of semi-arid and desert regions. Glaciers and glacial topography. Lakes and swamps. Shore forms and shore processes of seas and lakes. Topography caused by ground-water. Volcanism and volcanoes. Islands and coral reefs. Plains, plateaus and mountains. Appendix. Index.

Note: (1193) An introductory text intended for the use of college students who have little or no background in geology. The book is concerned with basic principles regarding the origin, description and classification of the relief features of the earth, and no attempt is made to include lengthy discussions of conflicting theories. The changes made in this edition are minor and consist essentially in the correction of errors and the rearrangement of some of the material. As in the previous edition, the many excellent photographs constitute an important adjunct to the text proper.

VOLCANOLOGY AND SEISMOLOGY

HECK, NICHOLAS HUNTER

Earthquake history of the United States. Revised (1947) edition Part 1, Continental United States (exclusive of California and western Nevada) and Alaska. Washington D C. Government Printing Office, 1947 85 p illus. 25 cm. (United States. Coast and Geodetic Survey Serial no 609) Paper $0 45 439

Contents: Introduction. Earthquake conditions in the various states. Explanation of details in lists of earthquakes. Northeastern region. Eastern region. Central region. Western mountain region. Washington and Oregon. Earthquakes by years and months. Alaska. References.

Note: (1199) A chronological listing by regions with descriptions of all recorded earthquakes in the United States except for western Nevada and California from the earliest times through 1946. The present edition, in addition to bringing the account up to date, includes corrections and minor additions to the edition of 1938. Part of this history has not been published in revised edition.

JAGGAR, THOMAS AUGUSTUS

Origin and development of craters. New York The Geological Society of America, 1947 508 p illus. 25 cm. (The Geological Society of America. Memoir 21) $6.00 440

Contents (abridged) Abstract. Introduction. Part 1 Kilauea Crater in 1912–1918. Part 2 Kilauea and Mauna Loa, 1909–1935. Review of Hawaiian volcanic system, 1900–1935 Part 3 Kilauea steam blast eruption, 1924. Part 4, Series of development sketch maps and profiles of Halemaumau, checked by topographic mapping, 1917–1934 Part 5 Hawaiian crater histories Geologic history of Hawaii. Hawaiian activities, 1750–1943. Part 6, Principles of crater evolution Earth the offspring of the sun. Classifications in volcanism. Crustal physics and chemistry Part 7 Summary and conclusions. References cited. Explanation of Plates 1–73. Index.

Note. The motive for assembling these observations, maps, sections, diagrams, curves, photographs, reviews, and narrative histories was to outline the field of volcano science that has grown up since James Dwight Dana published his *Characteristics of Volcanoes* in 1891. The title of the book follows the precedent of many authors, including Dana, in generalizing from Hawaii.

JAGGAR, THOMAS AUGUSTUS

Volcanoes declare war logistics and strategy of Pacific volcano science. Honolulu T H. Paradise of the Pacific, Limited, 1945 166 p. illus 29 cm. $3 75 441

Contents (abridged) Hawaiian volcanoes: Broadcasting from Kilauea's fiery cauldron. What happened in Halemaumau's steamblast eruption of 1924. Army aviators successfully bomb Mauna Loa. South Sea outbreaks: Tin Can Islanders live next to spouting lava. New Zealand volcanoes tie up with Tonga. East Indian explosions: Rabaul harbor erupts murder in 1937 Krakatoa revived: was Tambora bigger? Java gas warfare and Bali's lava flows. The Western Pacific rim Taal and Mayon are killers. Sakurajima learned the lesson of Mount Pelee. Aleutian fire mountains. Bogoslof piles up as lava under the sea. Alaska disclosed hidden guns in 1912. The amphibian jeep of the Pavlof expedition. Canada and the Western States: Our Cascade Mountains are not dead. Lassen Peak in 1915 was as violent as Mount Pelee. California beat can ran engines. From Mexico to Chile the earth breathes fire The Mexican Cordillera gives birth to new volcanoes. Central America is explosive like Java. Fireworks tapering off from Martinique to Cape Horn. Review of volcano science. References Index.

Note Volcanoes and volcanic activity in and near the Pacific Ocean are the subject of this book. The author has been Director for quarter of century of the volcano experiment station at Kilauea and the leader of several expeditions to investigate volcanoes. However the book is not for professional workers in this field but is for the general reader Specific volcanic eruptions and volcanology in general are described in precise, picturesque language. Catastrophic eruptions are usually described in the words of eye witnesses. The text is supplemented by more than one hundred remarkable photographs.

MACELWANE, JAMES BERNARD

When the earth quakes. Milwaukee The Bruce Publishing Company 1947 288 p. Illus. 23 cm. (Science and culture series J Husslein general editor) $5 00 442

Contents: What earthquakes do. Some modern earthquakes. Kinds of earthquakes. Why earthquakes? When and where? Field study of earthquakes. Sea quakes and seismic sea waves. Earthquakes in the air Study of earthquakes with instruments. Seismographs for natural earthquakes. What earthquake records tell us. The engineer looks at earthquakes. Engineering seismology Seismological engineering. Rock bursts and overstrains. Prospecting with seismographs. Microseisms and storms at sea. Appendix. Index.

Note: A lucidly written review of earthquake phenomena and of seismological methods and knowledge. The accounts of notable earthquakes are factual The descriptions of such things as seismological instruments are clear even though some technical terminology is employed. The book will appeal to scientists trained in other fields who need general knowledge of seismology and to laymen with well-developed interests in natural phenomena. The text is supplemented by an abundance of pictorial material. The author is Dean of the Institute of Geophysical Technology of St. Louis University

HYDROLOGY

BARROWS, HAROLD KILBRETH

Floods, their hydrology and control. New York McGraw Hill Book Company Inc. 1948 432 p illus. 23 cm. $6.50 443

Contents: Historical—types of floods. Meteorology of storms—precipitation in the United States. Storm rainfall in the United States. Methods of estimating flood flows—discharge of rivers of the United States. The flood hydrograph—flood frequency Spillways and spillway gates—costs Notable floods in the United States. Floods—damages or losses. Reservoirs for flood control. Mississippi River basin. Ohio, Missouri, and Upper Mississippi rivers. White, Red, Arkansas, and Ouachita rivers. Tennessee Valley Authority Connecticut and Merrimack rivers. Willamette river Beaverville, Los Angeles. United States Bureau of Reclamation projects—Department of Interior Watershed projects of United States Department of Agriculture (Soil Conservation Service) Local flood protection by levees and river walls. Federal legislation and economic aspects of flood control, 1947 Appendices: Discharge of rivers of United States Form for summary of results of flood-damage surveys. Problems. Index.

Note: The principles and methods of flood control as outlined in this volume are based on an extensive study of the flood control and abatement measures which have been put into practice in the United States. In fact the greater part of the book is devoted to a review of the characteristics of fourteen major floods which have occurred in the United States during the past forty years, and to descriptions of specific flood control measures which have been carried out in various parts of the United States. This latter section is particularly valuable for its compilation of engineering data regarding types of dams and reservoirs installed, their size, purpose, and cost, and summary of the flood and runoff conditions for each area considered.

FOSTER, EDGAR E.

Rainfall and runoff New York The Macmillan Company 1948 487 p. illus. 24 cm. $9 00 444

Contents. The field of hydrology Atmospheric moisture and its precipitation. Air masses. Storms which produce precipitation. Distribution of precipitation. Frequency of precipitation. Snow Evaporation. Runoff. Floods. Ground water The utilization of hydrologic data. Bibliography Index.

Note During the past quarter-century the methods which have been developed for collecting and evaluating data relating to rainfall, snowfall, flood peaks, runoff, depth of ground water, etc have reached the proportions of science. This volume describes the methods and basic principles of hydrology but its primary purpose is to show how statistical methods may be employed in the study and examination of hydrological data, particularly those dealing with precipitation and runoff. It is assumed that the reader has knowledge of general statistical methods. The work is addressed to persons with professional interest in the subject, especially engineers concerned with flood control, water power irrigation, and water supply projects.

JAHNS, RICHARD HENRY

Geologic features of the Connecticut valley Massachusetts as related to recent floods. Prepared in cooperation with the Commonwealth of Massachusetts Department of Public Works. Washington D C. Government Printing Office, 1946 158 p illus. 23 cm. (United States Geological Survey Water supply paper 996) Paper $1 75 445

Contents Introduction. General features of the Connecticut valley drainage basin in Massachusetts. General geology Physiographic development of the Connecticut valley in Massachusetts. Development of the postglacial Connecticut river. Characteristics of the Connecticut river and its tributaries. General features of the 1936 and 1938 floods. Erosional effects of the 1936 and 1938 floods. Flood sedimentation Major-flood periodicity Engineering applications. Mechanical analyses of flood sediments and associated materials. Reference lists. Index.

Note. Gives the results of geologic study of certain features that bear upon recent flood behavior of rivers flowing in the Massachusetts part of the Connecticut valley The report is in part an outline of the physiographic history of the Connecticut river especially from Mesozoic time to the present, and in part discussion of erosional and depositional processes associated with the extraordinary floods of March, 1936 and September, 1938. Notes and suggestions concerning engineering applications of the study are included A classified bibliography covers twelve pages.

JONES BENJAMIN EARL AND RANDOLPH O HELLAND

Index to river surveys made by the United States Geological Survey and other agencies. Revised to July 1 1947 Washington D C. Government Printing Office 1948 145 p. 23 cm. (United States. Geological Survey Water-supply paper 995) Paper $0 75 446

Contents: Introduction Alabama Alaska. Arizona. Arkansas. California Colorado. Connecticut. Delaware. District of Columbia Florida. Georgia. Hawaii. Idaho. Illinois Indiana. Iowa. Kansas Kentucky Louisiana. Maine. Maryland. Massachusetts. Michigan. Minnesota. Mississippi Missouri. Montana. Nebraska Nevada. New Hampshire New Jersey New Mexico. New York. North Carolina. North Dakota. Ohio. Oklahoma. Oregon. Pennsylvania. Rhode Island. South Carolina. South Dakota. Tennessee. Texas. Utah. Vermont. Virginia. Washington. West Virginia. Wisconsin. Wyoming. Index.

Note: In 1926 the Geological Survey issued the predecessor of this index as *Water-supply paper 557* The new publication records all river surveys made by the Geological Survey prior to July 1 1947, and many of the river surveys made by the Corps of Engineers of the United States Army the Bureau of Reclamation of the Department of the Interior and a number of State agencies. The surveys are arranged by states and within the states by drainage basins. A brief description is given of each survey, followed by the scale of the map, the contour intervals, the height to which topography is shown, and place and date of publication.

WARING GERALD ASHLEY, AND OSCAR E. MEINZER

Bibliography and index of publications relating to ground water prepared by the Geological Survey and cooperating agencies. Washington, D C. Government Printing Office 1947 412 p 23 cm. (United States. Geological Survey Water-supply paper 992) Paper $1.00 447

Contents: Introduction. Bibliography: Water-supply papers. Annual reports. Monographs. Professional papers. Bulletins. Mineral resources. Geologic folios. Reports published by cooperating agencies. Mimeographed and other duplicated reports. Journal articles. Index.

Note: In effect a second edition of the bibliography published in 1918 as Water-supply paper 427 (*Bibliography and index of the publications of the United States Geological Survey relating to ground water* by O. E. Meinzer) Lists a total of 1777 papers published between 1845 and 1944, including all listed in the 1918 bibliography and 1160 issued since then. In addition to author, title, and other publication information, each entry contains a brief abstract or notation of its reference to ground water

WOOLLEY RALF RUMEL

Cloudburst floods in Utah 1850–1938 With a chapter on physiographic features by Ray E. Marsell and a foreword by Nathan C. Grover Washington, D C. Government Printing Office, 1946 128 p illus. 23 cm. (United States. Geological Survey Water supply paper 994) Paper $1.50 448

Contents (abridged) Cloudburst, definition. Scope of report. Cooperation and basic data. Previous studies. Climate General discussion. Meteorology Cloudburst floods: General statement. Geographic distribution. Character and extent of areas affected. Frequency Catchment basins. Mudflows. Relation of cloudburst floods and mudflows to topography and geology Historical floods Relation of cloudburst floods to settlement and use of the land. Economic importance of areas affected by cloudburst floods. Index.

Note: Storms and floods of the cloudburst type in Utah have been *relatively frequent*, numbering more than 300 according to the records since 1847 and causing damage and devastation to crops, highways, railroads, power plants, and homes. This report is a study of the history of these floods and their causes.

PALEONTOLOGY

ANDREWS HENRY NATHANIEL JR.

Ancient plants and the world they lived in with drawings by Anna Schutte. Ithaca, N Y Comstock Publishing Co., Inc. 1947 279 p. illus. 24 cm. $4.50 449

Contents: Fossil plants. The ferns and their ancestors. Lingering remnants of the coal age. Invasion of the land. Coal, fuel from yesterday's forests. Ferns that bore seeds. Cycads, plants of the dinosaur age. Ginkgo. The pines have not bowed to the ages. Sequoia, a living link with the past. Changing climates of the Pacific Coast. The algae, fungi, and mosses. The fossil hunters. Past epochs of the Arctic. Genealogies in the plant kingdom. Appendix: Living plants. References. Index.

Note: The fascinating world of paleobotany is treated here for the non-specialist. The author is a professional paleobotanist, but the book is written for geologists, amateur mineralogists, and laymen who are curious about fossil plants. The author describes the ways in which ancient plants became preserved in the rocks and indicates the techniques used to ascertain the relationship between living and fossil plants. The volume is illustrated with many excellent photographs. A selected six-page bibliography is included.

ARNOLD CHESTER ARTHUR

An introduction to paleobotany New York McGraw Hill Book Company, Inc. 1947 433 p. illus. 23 cm. (McGraw Hill publications in the botanical sciences, Edmund W Sinnott, consulting editor) $5.50 450

Contents Introduction. How plants become fossils. The nonvascular plants. The early vascular plants. The ancient lycopods. Ancient scouring rushes and their relatives. Paleozoic fernlike foliage. The ancient ferns. The pteridosperms. Cycadophytes and ginkgos. The cordaitales. The ancient conifers. Ancient flowering plants. The sequence of the plant world in geologic time. Fossil plants and environment. Paleobotanical systematics. Index.

Note. An introduction to the study of fossil plants which is intended primarily for graduate or advanced undergraduate students in biology and botany rather than in geology It emphasizes the usual botanical factors of morphology structure, distribution, phylogeny and ecology of fossilized plants, and pays very little attention to the stratigraphy or lithology involved. There are many excellent photographs and drawings of fossil plant remains. North American plants are discussed and used for illustration wherever possible, and citations to relevant literature are given at the end of each chapter.

BERRY EDWARD WILBER

The origin of land plants and four other papers. Baltimore The Johns Hopkins Press, 1945 186 p. illus. 24 cm. (Johns Hopkins University studies in geology, number 14 edited by J T Singewald, Jr) Paper $2.50 451

Contents: The beginnings and history of land plants. Fossil floras from southern Ecuador The volcanic stage in the Andean geosyncline. Late Tertiary fossil plants from eastern Colombia. The genus Linguifolium of Arber Index.

Note. A collection of paleobotanical papers, four of which deal with fossil plants from northern South America. Photo-reprints and drawings of some of the fossil specimens are included. The volume is intended for paleontologists and students of historical geology

BRANSON CARL COLTON

Bibliographic index of Permian invertebrates. New York The Geological Society of America, 1948 1049 p 25 cm. (The Geological Society of America. Memoir 26) $9.50 452

Note. A guide to descriptions and illustrations of all genera, species, and variety of Permian invertebrates which have appeared in available literature through June, 1944. The arrangement is by large taxonomic unit, and then alphabetically by genera and species. Bibliographic information including the source of the description, author and date is given for each generic and specific name. The stratigraphic level and locality are also indicated. All references cited in the index are arranged alphabetically by author at the end of the volume.

CLARK BRUCE LAWRENCE AND J WYATT DURHAM

Eocene faunas from the department of Bolivar, Colombia. New York The Geological Society of America, 1946 126 p illus 25 cm. (Geological Society of America. Memoir 16) $2 10 453

Contents: Previous work. General statement. Part I: The molluscan faunas, by Bruce L. Clark. Part II: Corals, by J. Wyatt Durham. Description of localities. Bibliography Explanation of plates. Index.

Note As indicated in the title, this monograph contains descriptions of invertebrate fossils collected from the Middle to Upper

Eocene strata of western Colombia. The work is intended for paleontologists and petroleum geologists. Most of the species described are also illustrated.

COLBERT EDWIN HARRIS

The dinosaur book the ruling reptiles and their relatives. Illustrated by John C. Germann with additional illustrations, previously published, by C. R. Knight and others. New York The *American Museum* of Natural History, 1945 156 p illus. (part col d) 28 cm. (Man and nature publications. Handbook no 14) $2.50 454

Contents. Introducing the dinosaurs. Pioneer students of the dinosaurs. Hunting dinosaurs. The age of reptiles. The first land animals. Primitive reptiles. The mammal-like reptiles. Ancestors of the dinosaurs. The kinds of dinosaurs. Adaptations of the dinosaurs. Dinosaurian associations. Flight. Sea serpents. Decline of the dinosaurs. The survivors. Why study fossils? Where the dinosaurs and their relatives are found. How the dinosaurs and their relatives are classified and named. Other sources of information. Index.

Note An informative and entertaining book for anyone interested in dinosaurs. A considerable amount of rather solid paleontological information is incorporated in the text and in the charts and synoptic tables, but all of it has been made readable and well within the grasp of interested laymen who frequent natural history museums. Excellent photographs of dinosaur restorations give the reader realistic idea of what these reptiles looked like when alive. A glossary and pronunciation guide is included with the index.

CUSHMAN, JOSEPH AUGUSTINE

Upper Cretaceous Foraminifera of the Gulf coastal region of the United States and adjacent areas. *Washington D C.* Government Printing Office, 1946 241 p illus. 29 cm. (United States Geological Survey Professional paper 206) Paper $1.00 455

Contents Introduction List of localities. Systematic descriptions: Astrorhizidae. Rhizamminidae. Saccamminidae. Hyperamminidae. Reophacidae Ammodiscidae Lituolidae. Textulariidae. Verneuilinidae. Valvulinidae. Silicinidae Miliolidae Trochamminidae. Ophthalmidiidae Lagenidae. Polymorphinidae. Nonionidae Camerinidae Heterohelicidae. Buliminidae. Ellipsoidinidae. Rotaliidae. Cassidulinidae. Chilostomellidae. Globigerinidae. Hantkeninidae. Globorotaliidae. Anomalinidae. Plates 1–66. Index

Note Collections on which this paper is based are largely from the Upper Cretaceous of Texas, where succession of Foraminifera-bearing strata are exposed material was also available from Louisiana, Arkansas, Tennessee Mississippi, and Alabama, and is included, along with records from adjacent areas. Nearly 600 species and varieties are recorded, with description, locality and bibliographical references, and nearly all are illustrated in the section of plates. Many of the species are known to be excellent index fossils.

GARDNER, JULIA

Mollusca of the Tertiary formations of northeastern Mexico New York The Geological Society *of America, 1945 332 p illus.* 25 cm. (Geological Society of America. Memoir 11) $3 90 456

Contents Stratigraphic notes General statement. Paleocene series. Eocene series. Oligocene series Miocene series. U. S. Geological Survey station numbers. Systematic descriptions Phylum Vermes Phylum Mollusca. Class Pelecypoda Order Prionodesmacea. Order Anomalodesmacea. Order Teleodesmacea Class Scaphopoda. Class Gastropoda. Order Pectinibranchiata. Suborder Euthyneura: Order Opisthobranchia. Order Pteropoda. Suborder Pulmonata. Class Cephalopoda Order Nautilidea. Phylum Arthropoda. Explanation of plates. Index.

Note Old species of Tertiary mollusks from this area are discussed and new species are described and illustrated in this systematic study. An attempt also is made to correlate the fossils described with similar faunas from known areas. The report is based on all company collections and is written for paleontologists and petroleum geologists.

HOWELL, BENJAMIN FRANKLIN

Revision of the Upper Cambrian faunas of New Jersey New York The Geological Society of America, 1945 46 p illus. 25 cm. (Geological Society of America. Memoir 12) $1 00 457

Contents: General statement. Lower Kittatinny trilobites at Carpentersville. Lower Kittatinny fauna at Peapack. Upper Kittatinny faunas. Age of the faunas. References cited. Explanation of plates. Index.

Note A report of paleontologic research that has led the author to believe that the Upper Cambrian strata referred to in the older literature as the Kittatinny should be subdivided into stratigraphic members. The results of the author's studies have already been incorporated in his chart, *Correlation of the Cambrian formations of North America*, and the present memoir contains descriptions and photographs of the fossils upon which they were based.

KNECHTEL MAXWELL M AND OTHERS

Mesozoic fossils of the Peruvian Andes. Baltimore The Johns Hopkins Press 1947 150 p illus. 24 cm. (The Johns Hopkins University studies in geology no 15 J T Singewald Jr editor) Paper $4 00 458

Contents: Part Introduction, by Maxwell M. Knechtel and Edward F Richards. List of collections Description of collection localities, by Joseph T Singewald, Jr Part II, Echinoidea, Pelecypoda and Gastropoda, by Edward F Richards. Part III, Cephalopoda, by Maxwell M. Knechtel Part IV Crustacea, by Mary J Rathbun. Bibliography Description of plates. Plates.

Note The morphology and taxonomy of suite of invertebrate fossils The papers collected here provide descriptions of Peruvian Mesozoic fossils obtained mostly in expeditions led by the editor of the volume and now housed at the Johns Hopkins University or the *United States National Museum.* They were originally prepared as doctoral dissertations and are reprinted here to aid current paleontological studies in the same region.

MILLER ARTHUR K.

Tertiary nautiloids of the Americas. New York The Geological Society of America, 1947 234 p illus. 25 cm. (The Geological Society of America. Memoir 23) $4 50 459

Contents. Abstract. Introduction and acknowledgments Previous work Occurrence. Modern *Nautilus*, its habits, habitat, anatomy *and shell Glossary of shell terminology Classification of* Tertiary nautiloids. Systematic paleontology Family Nautilidae d'Orbigny 1840. Family Hercoglossidae Spath, 1927 Family Aturidae Hyatt, 1894. Addendum. Bibliography Explanation of Plates 1 100 Index.

Note In this monograph the author has endeavored to assemble all the significant published data relating to the nautiloids in the Tertiary strata of North, Central, and South America and the West Indies, and, adding to these the new facts discovered by him, to make an account as nearly complete as possible. Some original contributions are thus reported, in addition to which the work is convenient reference aid for both students and professional geologists and paleontologists. Modern *Nautilus*, although not known to be represented in the American Tertiary, extends back to the Eocene and is discussed in detail because more or less typical of the Tertiary nautiloids.

PEABODY FRANK ELMER

Reptile and amphibian trackways from the Lower Triassic Moenkopi formation of Arizona and Utah. Berkeley University of California Press, 1948 295–467 p. illus. 26 cm. (University of California. Bulletin of the Department of Geological Sciences. Vol. 27 no 8) Paper $3.50 460

Contents (abridged) Method Glossary Geological occurrence. The Moenkopi formation of the Little Colorado Valley Origin of the trackway-bearing surfaces. Family Capitosauridae (Amphibia Labyrinthodonti) Lacertoid trackways (Reptilia: ? Prolacertilia) from the Upper Moenkopi. Lacertoid footprints from the Lower Moenkopi. Rotodactylidae n. fam. (Reptilia: Pseudosuchia) Chiro-

theriidae Abel (Pseudosuchia) Genus Chirotherium Kaup, 1835. Large-manus chirotheriids from the Moenkopi formation. Small-manus chirotheriids from the Moenkopi formation. Structure of Chirotherium. Summary Bibliography Plates.

Note. A full account of investigations made by the author of fossilized impressions of footprints made by reptiles and amphibians in the Triassic period of geology. Lest an incorrect impression be given, it should be stated further that the author's interest was not in individual footprints but in sequences of prints made by walking animals, which sequences he calls "trackways. The trackways were studied from the viewpoint of the light they throw upon the morphology of the extinct animals. The author succeeds in showing that much can be learned from fossilized trackways about extinct animals and the fauna associated with them.

ROMER, ALFRED SHERWOOD

Vertebrate paleontology Second edition. Chicago Ill. University of Chicago Press 1945 687 p. illus. 25 cm $7.50. 461

Contents: Introductory. Primitive jawless vertebrates. Placoderms. Sharklike fishes. Bony fishes. Amphibians. Primitive reptiles. Varied reptilian types. Synaptosaurian reptiles. Lepidosaurian reptiles. Ruling reptiles. Dinosaurs. Birds. Mammal-like reptiles. The structure of mammals. Primitive mammals. Placental origins: insectivores, bats. Primates. Carnivores. Archaic ungulate groups. Subungulates. Perissodactyls. Artiodactyls. Edentates. Whales. Rodents. Vertebrate history; introductory. paleozoic vertebrates. Mesozoic vertebrates. Cenozoic vertebrates. Classification of vertebrates. Bibliography Index.

Note. The only modern work in the English language that treats the whole subject. It is designed primarily for beginners at the undergraduate college level. Besides its use as text, it is valuable as reference book to scientists in other professions such as geology anatomy and physical anthropology. The major structural features of the various groups are discussed in detail. A complete skeleton and skull of representative member of nearly every group is shown. In the present edition about half of the original work has been entirely rewritten, and the other parts have been somewhat revised. Three new chapters have been added. There are now 377 figures, and the revised bibliography contains 479 entries.

RUEDEMANN, RUDOLF

Graptolites of North America. New York The Geological Society of America, 1947 652 p illus 25 cm. (Geological Society of America. Memoir 19) $9.00 462

Contents: Part Introduction. History of the study of graptolites. General statement. Methods of investigation and illustration. Terminology Ecology Morphology Structure and composition of periderm. Preservation. Classification. Phylogeny Affinities of graptolites. Distribution of graptolites in North America. General statement. Eastern Appalachian geosyncline region. Southwest region. Cordilleran region. Relations of western Cordilleran faunas of Ordovician age to Eastern Appalachian faunas. Interior Lowlands, Arctic Archipelago, and Greenland. Summary of conclusions from the distribution of graptolites. List of graptolites of North America. List of synonyms. Part II: Description of graptolites: Dendroidea. Genera possibly belonging to hydroid coelenterates, other than Dendroidea. Dendroidea incertae sedis. Graptoloidea. Graptoloidea incertae sedis. Bibliography Explanation of plates. Index.

Note. The main purpose of this extensive work is to describe all North American species of graptolites. About 700 species, varieties, and mutations are distinguished. Another purpose is to establish the distribution of all forms of graptolites on the North American continent, and thereby to elaborate the principal Ordovician and Silurian basins and their relations to the Atlantic and Pacific Oceans.

STAINBROOK, MERRILL ADDISON

Brachiopoda of the Independence shale of Iowa. New York The Geological Society of America 1945 74 p illus. 25 cm. (The Geological Society of America. Memoir 14) $1.20 463

Contents: Stratigraphic position of the Independence shale. Relationships of the Independence fauna. Systematic descriptions. Order Atremata. Order Neotremata. Order Protremata. Order Telotremata. Bibliography Explanation of plates. Index.

Note: The taxonomy and morphology of 40 species of Devonian brachiopods from the Independence shale formation of Iowa are contained in this monograph. All of the species are illustrated, and 17 of them are described here for the first time.

THOMPSON, MARCUS LUTHER, AND OTHERS

Permian fusulinids of California, by M. L. Thompson Harry E Wheeler and John C. Hazzard. New York The Geological Society of America 1946 77 p illus. 25 cm. (Geological Society of America. Memoir 17) $1.50 464

Contents (abridged): Part I, Occurrence and classification. Part II, Permian fusulinids of northern California, by M. L. Thompson and Harry E. Wheeler General statement. Stratigraphic summary Systematic paleontology Collection localities. Part III, Permian fusulinids of southern California, by M. L. Thompson and John C. Hazzard General statement. Stratigraphic summary Systematic paleontology References cited. Explanation of plates. Index.

Note. This publication describes in detail 16 species or varieties of seven genera and two subfamilies of fusulinid Foraminifera from the Permian of California and compares them with all other principal American Permian fusulinid faunas. The fusulinids are among the best indices for correlation of Permian rocks. Part contains summary of the more important Permian fusulinid faunas from North and Central America.

VAUGHAN THOMAS WAYLAND, AND JOHN WEST WELLS

American Old and Middle Tertiary larger Foraminifera and corals Part I, American *Paleocene and Eocene larger Foraminifera*, by Thomas Wayland Vaughan Part II, West Indian Eocene and Miocene corals by John West Wells. New York The Geological Society of America, 1945 Part I, 175 p. Part II 25 p illus. 25 cm. (Geological Society of America. Memoir 9) $3.20 465

Contents: Part Paleocene and Eocene larger Foraminifera from Barbados. General relations of Barbados. Stratigraphy Explanations of Senn's Barbadian locality numbers. Faunal list, correlation, and ecology of Barbadian Paleocene and Eocene faunas. Systematic descriptions. Family Orbitoididae. Family Camerinidae. Family Discocyclinidae. Family Asterocyclinidae. Family Orbitoididae. Catalogue of American Discocyclinidae General statement. Structure. Classification. Ecology Descriptions of some species—Genus Discocyclina. Genus Pseudophragmina. Stratigraphic position and geographic distribution of the species. Table of American species of the Discocyclinidae Literature cited. Explanation of plates 1-46. Index. Part Corals from the Eocene Upper Scotland formation of Barbados: List of species and their distribution. Systematic note of the coral fauna. Systematic descriptions. Two corals from the Miocene of Martinique. References Explanation of plates. Index.

Note. Paleontologic descriptions and figures of selected Foraminifera and corals comprise most of this *Memoir*. Both parts include extensive series of illustrations. The work is intended for paleontologists and students of geology

ZANGERL RAINER

The vertebrate fauna of the Selma formation of Alabama. Chicago Chicago Natural History Museum, 1948. illus. 31 cm. (Chicago Natural History Museum. Fieldiana Geology memoirs. Vol. 3 number 1 and 2) Paper $1.50. 466

Contents: Part I, Introduction. List of illustrations. Geography and geology of region. Earlier finds of fossil vertebrates in Selma deposits of Alabama. References. Part II, The pleurodiran turtles; List of illustrations Introduction. Description 1 Podocnemis barbouri, sp. nov. Summary References.

Note. A report of an investigation of fossils found in an investigation of the Selma outcrop in Alabama during two field trips made by the author and others in 1945 and 1946. The locations of finds in relation to geology and topography are described. The second part describes in detail the turtle finds, giving tables of measurements and relationships of finds to the known material. There are fifteen large carefully-drawn figures and four photographic plates. Bibliographies are attached to each.

Eocene strata of western Colombia. The work is intended for paleontologists and petroleum geologists. Most of the species described are also illustrated.

COLBERT EDWIN HARRIS

The dinosaur book the ruling reptiles and their relatives. Illustrated by John C. Germann, with additional illustrations previously published, by C. R. Knight and others. New York The American Museum of Natural History, 1945 156 p illus. (part col'd) 28 cm. (Man and nature publications Handbook no 14) $2.50 454

Contents. Introducing the dinosaurs. Pioneer students of the dinosaurs. Hunting dinosaurs. The age of reptiles. The first land animals. Primitive reptiles. The mammal-like reptiles. Ancestors of the dinosaurs. The kinds of dinosaurs. Adaptations of the dinosaurs. Dinosaurian associations. Flight. Sea serpents. Decline of the dinosaurs. The survivors. Why study fossils? Where the dinosaurs and their relatives are found. How the dinosaurs and their relatives are classified and named. Other sources of information. Index.

Note. An informative and entertaining book for anyone interested in dinosaurs. A considerable amount of rather solid paleontological information is incorporated in the text and in the charts and synoptic tables, but all of it has been made readable and well within the grasp of interested laymen who frequent natural history museums. Excellent photographs of dinosaur restorations give the reader realistic idea of what these reptiles looked like when alive. A glossary and pronunciation guide is included with the index.

CUSHMAN, JOSEPH AUGUSTINE

Upper Cretaceous Foraminifera of the Gulf coastal region of the United States and adjacent areas Washington D C Government Printing Office, 1946 241 p illus. 29 cm. (United States. Geological Survey Professional paper 206) Paper $1.00 455

Contents Introduction. List of localities Systematic descriptions: Astrorhizidae. Rhizamminidae Saccamminidae. Hyperamminidae. Reophacidae. Ammodiscidae. Lituolidae. Textulariidae Verneuilinidae. Valvulinidae. Silicinidae Miliolidae Trochamminidae. Ophthalmidiidae. Lagenidae. Polymorphinidae Nonionidae. Camerinidae Heterohelicidae. Buliminidae. Ellipsoidinidae. Rotaliidae. Cassidulinidae Chilostomellidae. Globigerinidae. Hantkeninidae. Globorotaliidae. Anomalinidae. Plates 1–66 Index.

Note Collections on which this paper is based are largely from the Upper Cretaceous of Texas, where successions of Foraminifera-bearing strata are exposed, material was also available from Louisiana, Arkansas, Tennessee, Mississippi, and Alabama, and is included, along with records from adjacent areas. Nearly 600 species and varieties are recorded, with description, locality and bibliographical references, and nearly all are illustrated in the section of plates. Many of the species are known to be excellent index fossils.

GARDNER JULIA

Mollusca of the Tertiary formations of northeastern Mexico New York The Geological Society of America 1945 332 p illus. 25 cm. (Geological Society of America. Memoir 11) $3 90 456

Contents Stratigraphic notes General statement Paleocene series. Eocene series. Oligocene series Miocene series. U S Geological Survey station numbers Systematic descriptions Phylum Vermes. Phylum Mollusca. Class Pelecypoda. Order Prionodesmacea. Order Anomalodesmacea. Order Teleodesmacea. Class Scaphopoda Class Gastropoda Order Pectinibranchiata Suborder Euthyneura. Order Opisthobranchia. Order Pteropoda. Suborder Pulmonata. Class Cephalopoda Order Nautiloidea. Phylum Arthropoda. Explanation of plates. Index.

Note Old species of Tertiary mollusks from this area are discussed and new species are described and illustrated in this systematic study An attempt also is made to correlate the fossils described with similar faunas from known areas. The report is based on all company collections and is written for paleontologists and petroleum geologists.

HOWELL, BENJAMIN FRANKLIN

Revision of the Upper Cambrian faunas of New Jersey New York The Geological Society of America, 1945 46 p illus. 25 cm. (Geological Society of America. Memoir 12) $1 00 457

Contents: General statement. Lower Kittatinny trilobites at Carpentersville. Lower Kittatinny fauna at Peapack. Upper Kittatinny faunas. Age of the faunas. References cited. Explanation of plates. Index.

Note: A report of paleontologic research that has led the author to believe that the Upper Cambrian strata referred to in the older literature as the Kittatinny should be subdivided into stratigraphic members. The results of the authors' studies have already been incorporated in his chart, *Correlation of the Cambrian formations of North America*, and the present memoir contains descriptions and photographs of the fossils upon which they were based.

KNECHTEL MAXWELL M AND OTHERS

Mesozoic fossils of the Peruvian Andes. Baltimore The Johns Hopkins Press 1947 150 p illus. 24 cm. (The Johns Hopkins University studies in geology no 15 J T Singewald, jr editor) Paper, $4 00 458

Contents. Part I: Introduction, by Maxwell M. Knechtel and Edward F Richards. List of collections. Description of collection localities, by Joseph T Singewald, jr Part II, Echinoidea, Pelecypoda and Gastropoda, by Edward F Richards. Part III, Cephalopoda, by Maxwell M. Knechtel. Part IV Crustacea, by Mary J. Rathbun. Bibliography Description of plates. Plates.

Note. The morphology and taxonomy of suite of invertebrate fossils. The papers collected here provide descriptions of Peruvian Mesozoic fossils obtained mostly in expeditions led by the editor of the volume and now housed at the Johns Hopkins University or the United States National Museum. They were originally prepared as doctoral dissertations and are reprinted here to aid current paleontological studies in the same region.

MILLER ARTHUR K.

Tertiary nautiloids of the Americas New York The Geological Society of America, 1947 234 p illus. 25 cm. (The Geological Society of America. Memoir 23) $4.50 459

Contents. Abstract. Introduction and acknowledgments. Previous work. Occurrence. Modern *Nautilus* its habits, habitat, anatomy and shell. Glossary of shell terminology Classification of Tertiary nautiloids. Systematic paleontology Family Nautilidae d'Orbigny 1840. Family Hercoglossidae Spath, 1927 Family Aturiidae Hyatt, 1894. Addendum. Bibliography Explanation of Plates 1–100. Index.

Note In this monograph the author has endeavored to assemble all the significant published data relating to the nautiloids in the Tertiary strata of North, Central, and South America and the West Indies, and, adding to them the new facts discovered by him, to make an account as nearly complete as possible. Some original contributions are thus reported, in addition to which the work is convenient reference aid for both students and professional geologists and paleontologists. Modern *Nautilus*, although not known to be represented in the American Tertiary extends back to the Eocene and is discussed in detail because more or less typical of the Tertiary nautiloids.

PEABODY FRANK ELMER

Reptile and amphibian trackways from the Lower Triassic Moenkopi formation of Arizona and Utah. Berkeley University of California Press, 1948 295–467 p. illus. 26 cm. (University of California. Bulletin of the Department of Geological Sciences. Vol. 27 no. 8) Paper $3.50 460

Contents (abridged) Method. Glossary Geological occurrence. The Moenkopi formation of the Little Colorado Valley Origin of the trackway-bearing surfaces Family Capitosauridae (Amphibia: Labyrinthodonti) Lacertoid trackways (Reptilia: ? Protorosauria) from the Upper Moenkopi. Lacertoid footprints from the Lower Moenkopi Rotodactylidae n. fam. (Reptilia: Pseudosuchia) Chiro-

theriidae Abel (Pseudosuchia). Genus *Chirotherium* Kaup, 1835. Large-manus chirotheriids from the Moenkopi formation. Small-manus chirotheriids from the Moenkopi formation. Structure of *Chirotherium*. Summary. Bibliography. Plates.

Note: A full account of investigations made by the author of fossilized impressions of footprints made by reptiles and amphibians in the Triassic period of geology. Lest an incorrect impression be given, it should be stated further that the authors' interest was not in individual footprints but in sequences of prints made by walking animals, which sequences he calls "trackways." The trackways were studied from the viewpoint of the light they threw upon the morphology of the extinct animals. The author succeeds in showing that much can be learned from fossilized trackways about extinct animals and the fauna associated with them.

ROMER, ALFRED SHERWOOD

Vertebrate paleontology. Second edition. Chicago, Ill. University of Chicago Press, 1945. 687 p. illus. 25 cm. $7.50 461

Contents: Introductory. Primitive jawless vertebrates. Placoderms. Sharklike fishes. Bony fishes. Amphibians. Primitive reptiles. Varied reptilian types. Synaptosaurian reptiles. Lepidosaurian reptiles. Ruling reptiles. Dinosaurs. Birds. Mammal-like reptiles. The structure of mammals. Primitive mammals. Placental origins. Insectivores, bats. Primates. Carnivores. Archaic ungulate groups. Subungulates. Perissodactyla. Artiodactyla. Edentates. Whales. Rodents. Vertebrate history: introductory. paleozoic vertebrates. Mesozoic vertebrates. Cenozoic vertebrates. Classification of vertebrates. Bibliography. Index.

Note: The only modern work in the English language that treats the whole subject. It is designed primarily for beginners at the undergraduate college level. Besides its uses as text, it is valuable as reference book to scientists in other professions such as geology, anatomy and physical anthropology. The major structural features of the various groups are discussed in detail. A complete skeleton and skull of representative member of nearly every group is shown. In the present edition about half of the original work has been entirely rewritten, and the other parts have been somewhat revised. Three new chapters have been added. There are now 377 figures, and the revised bibliography contains 479 entries.

RUEDEMANN, RUDOLF

Graptolites of North America. New York. The Geological Society of America, 1947. 652 p. illus. 25 cm. (Geological Society of America. Memoir 19) $9.00 462

Contents: Part I: Introduction. History of the study of graptolites. General statement. Methods of investigation and illustration. Terminology. Ecology. Morphology. Structure and composition of periderm. Preservation. Classification. Phylogeny. Affinities of graptolites. Distribution of graptolites in North America. General statement. Eastern Appalachian geosyncline region. Southwest region. Cordilleran region. Relations of western Cordilleran faunas of Ordovician age to Eastern Appalachian faunas. Interior Lowlands, Arctic Archipelago, and Greenland. Summary of conclusions from the distribution of graptolites. List of graptolites of North America. List of synonyms. Part II: Description of graptolites: Dendroidea. Genera possibly belonging to hydroid coelenterates, other than Dendroidea. Dendroidea incertae sedis. Graptoloidea. Graptoloidea incertae sedis. Bibliography. Explanation of plates. Index.

Note: The main purpose of this extensive work is to describe all North American species of graptolites. About 700 species, varieties, and mutations are distinguished. Another purpose is to establish the distribution of all forms of graptolites on the North American continent, and thereby to elaborate the principal Ordovician and Silurian basins and their relations to the Atlantic and Pacific Oceans.

STAINBROOK, MERRILL ADDISON

Brachiopoda of the Independence shale of Iowa. New York. The Geological Society of America, 1945. 74 p. illus. 25 cm. (The Geological Society of America. Memoir 14) $1.20 463

Contents: Stratigraphic position of the Independence shale. Relationships of the Independence fauna. Systematic descriptions. Order Atremata. Order Neotremata. Order Protremata. Order Telotremata. Bibliography. Explanation of plates. Index.

Note: The taxonomy and morphology of 40 species of Devonian brachiopods from the Independence shale formation of Iowa are contained in this monograph. All of the species are illustrated, and 27 of them are described here for the first time.

THOMPSON, MARCUS LUTHER, AND OTHERS

Permian fusulinids of California, by M. L. Thompson, Harry E. Wheeler and John C. Hazzard. New York. The Geological Society of America, 1946. 77 p. illus. 25 cm. (Geological Society of America. Memoir 17) $1.50 464

Contents (abridged): Part I, Occurrence and classification. Part II, Permian fusulinids of northern California, by M. L. Thompson and Harry E. Wheeler: General statement. Stratigraphic summary. Systematic paleontology. Collection localities. Part III, Permian fusulinids of southern California, by M. L. Thompson and John C. Hazzard. General statement. Stratigraphic summary. Systematic paleontology. References cited. Explanation of plates. Index.

Note. This publication describes in detail 26 species or varieties of seven genera and two subfamilies of fusulinid Foraminifera from the Permian of California and compares them with all other principal American Permian fusulinid faunas. The fusulinids are among the best indices for correlation of Permian rocks. Part [illegible] contains summary of the more important Permian fusulinid faunas from North and Central America.

VAUGHAN, THOMAS WAYLAND, AND JOHN WEST WELLS

American Old and Middle Tertiary larger Foraminifera and corals. Part I, American Paleocene and Eocene larger Foraminifera, by Thomas Wayland Vaughan. Part II, West Indian Eocene and Miocene corals, by John West Wells. New York. The Geological Society of America, 1945. Part I, 175 p. Part II, 25 p. illus. 25 cm. (Geological Society of America. Memoir 9) $3.20 465

Contents. Part [illegible]. Paleocene and Eocene larger Foraminifera from Barbados. General relations of Barbados. Stratigraphy. Explanations of Senn's Barbadian locality numbers. Faunal list, correlation, and ecology of Barbadian Paleocene and Eocene faunas. Systematic descriptions. Family Orbitoididae. Family Camerinidae. Family Discocyclinidae. Family Asterigerinidae. Family Orbitoididae. Catalogue of American Discocyclinidae: General statement. Structure. Classification. Ecology. Descriptions of some species—Genus Discocyclina, Genus Pseudophragmina. Stratigraphic position and geographic distribution of the species. Table of American species of the Discocyclinidae. Literature cited. Explanation of plates 2–44. Index. Part II. Corals from the Eocene Upper Scotland formation of Barbados: List of species and their distribution. Bionomic note of the coral fauna. Systematic descriptions. Two corals from the Miocene of Martinique. References. Explanation of plates. Index.

Note: Paleontologic descriptions and figures of selected Foraminifera and corals comprise most of this *Memoir*. Both parts include extensive series of illustrations. The work is intended for paleontologists and students of geology.

ZANGERL, RAINER

The vertebrate fauna of the Selma formation of Alabama. Chicago. Chicago Natural History Museum, 1948. illus. 31 cm. (Chicago Natural History Museum. Fieldiana Geology memoirs. Vol. 3 number 1 and 2) Paper $1.50. 466

Contents: Part I, Introduction. List of illustrations. Geography and geology of region. Earlier finds of fossil vertebrates in Selma deposits of Alabama. References. Part II, The pleurodiran turtles: List of illustrations. Introduction. Description of Podocnemis alabamae, sp. nov. Summary. References.

Note. A report of an investigation of fossils found in an investigation of the Selma outcrop in Alabama during two field trips made by the author and others in 1945 and 1946. The locations of finds in relation to geology and geography are described. The second part describes in detail the turtle finds, giving tables of measurements and relationships of finds to the known material. There are fifteen large carefully-drawn figures and four photographic plates. Bibliographies are attached to each.

OCEANOGRAPHY

BIGELOW HENRY BRYANT, AND W T EDMONDSON

Wind waves at sea, breakers and surf Washington D C. Government Printing Office 1947 177 p illus. (part col'd) 24 cm. (United States Hydrographic Office. Pub no 602) $2.80 467

Contents Foreword, by R. O. Glover. The physical nature of wind waves. The dimensions of waves. The continents of waves. The effects of currents and of shoal water. The measurement of waves. Seas and swells. The frequency of high and low seas and swells in different regions. Breakers and surf—their importance and origin. The character of surf under different conditions. Direction and height of breakers in relation to the shape of the coast. Selected references.

Note: A general account of the phenomena of waves caused by winds, and of breakers and surf. The book is designed for such readers as sailors and residents along seacoasts who have natural curiosity about waves but are not scientifically educated. Most of the discussions are rather detailed. In addition to the general and theoretical material, there are also interesting facts about the heights of waves, the force exerted by them, and the damage done by waves, surf, etc.

CARNEGIE INSTITUTION OF WASHINGTON DEPARTMENT OF TERRESTRIAL MAGNETISM

Scientific results of Cruise VII of the *Carnegie* during 1928–1929 under command of Captain J P Ault. Washington D C. Carnegie Institution of Washington, 1945–46 3 v illus. 29 cm. (Carnegie Institution of Washington. Publications. No 545 568 and 571) Publication 545 Oceanography I B paper $1.50, cloth $2.00 Publication 568 Oceanography III paper $2.25 cloth $2 75 Publication 571 Oceanography IV paper $1.50 cloth, $2.00 468

Contents (abridged) Oceanography I-B Observations and results in physical oceanography graphical and tabular summaries, by J A. Fleming, C. C. Ennis, H. U. Sverdrup, S. L. Seaton and W C. Hendrix Oceanography III Ocean atmospheric-electric results, by O. W Torreson, O H. Gish, W C. Parkinson and G. R. Wait. Oceanography IV The work of the *Carnegie* and suggestions for future scientific cruises, by James P Ault, J Harland Paul, John A. Fleming, Erik O. Moberg, Scott E. Forbush, Earnest S. Shepherd and Ruth M. Crow

Note (43) These volumes complete the important series in which the scientific results obtained during the seventh and final cruise of the nonmagnetic ship *Carnegie* have been presented.

COKER, ROBERT ERVIN

This great and wide sea. Chapel Hill The University of North Carolina Press 1947 325 p illus. 24 cm. $5 00 469

Contents: Part I History and geography Discovery of the seas. Beginnings of oceanography Pioneers of oceanography Oceanography in America. Sea and land. Part II, Chemistry and physics The sea as a solution Some physical properties of sea water Deposits at the bottom of the sea. Sea water in motion—general plans of circulation. Sea water in motion—water moved by the winds. Sea water in motion—tides and other movements. The sea and the sun. Part III, Life in the sea: Life in the sea—general conditions. Pasturage of the sea. Drifting life—the plankton. Composition of the plankton. Life on the bottom—the benthos. Life at large—the nekton. More about life at large—the nekton. Selected bibliography Index.

Note: Based mainly on a survey of oceanographic literature, this book for the educated layman avoids highly technical language and any tendency to stress the curious or dramatic. Essentially the author provides an interesting, readable account covering those aspects of the world's oceans and seas that are dealt with by the various branches of science. The work is well illustrated. There is a short bibliography of books for collateral reading and reference.

LANE FERDINAND C.

The mysterious sea. Garden City N Y Doubleday & Company Inc., 1947 345 p. 22 cm. $3.00 470

Contents (abridged) Ocean boundaries. Bottom contours. Carpets on ocean's floor How the oceans got their salt. Rivers in the sea. The tides. The waves. Where life began. Seaweeds, Sponges, jellies, and worms. The spiny skins. The crusty creatures. Shellfish. The fishes. Border dwellers. Feathered migrants. Farming the sea. Mining the sea. Ships. Shipwreck. The romance of charts. Lighting the sea. On the bridge of a great liner. How the sea controls our climate. Oceans of ice. Romantic trade routes. The oceans in a changing world. Index.

Note This very readable work appeals particularly to laymen who are curious about the seas, how they were formed, their inhabitants, and the part they have played in men's lives through the ages. Although unusual and curious facts are by no means suppressed, they are balanced by a fair amount of more fundamental information. The book is intended chiefly for recreational reading, and there is no bibliography to lead the reader along to further study

SHEPARD FRANCIS PARKER

Submarine geology New York Harper & Brothers 1948 338 p illus. 24 cm. (Harper's geoscience series Carey Croneis editor) $6.00 471

Contents: Introduction and history Methods of exploring the ocean floor. Waves and currents. Classification of sea coasts and shorelines. Beaches and sand shifting along the shores. Continental shelves: topography and sediments. Origin and history of the continental shelves. Continental slopes. Submarine canyons. Coral reefs. The floor of the deep oceans. Summary and economic applications. Appendix Conversion tables Bathymetric chart of the world. Index.

Note This work by the Professor of Submarine Geology at the Scripps Institute of Oceanography University of California, is a major contribution to its field. It embodies the results of many original investigations carried out by the author some of them with the aid of newly developed and still secret instruments and techniques. In addition, earlier investigations and hypotheses are reviewed and evaluated, particularly in such chapters as the one on the origin and history of the continental shelves. The illustrative matter includes reproductions of many excellent photographs of shore and submarine formations. A list of references to other literature accompanies each chapter.

STOMMEL, HENRY

Science of the seven seas. New York Cornell Maritime Press 1945 208 p illus. 19 cm. $2.50 472

Contents: The sea Waves. The ocean bottom. The nature of sea water Tides. Ice. Currents. Shores and islands. The sky: Atmospheric optical illusions. The upper air. Fogs and clouds. Lightning The winds. Celestial bodies. Ocean life. Bibliography Quizzing the seven seas. Index.

Note This small, easily understood book was written to give ocean voyagers an elementary awareness and appreciation of their

environment when at sea. Astronomy, meteorology, oceanography and geology have been drawn upon for simple explanations of numerous topics dealing with the physical nature of the sea and sky. The short section on ocean life consists of series of photoprints chosen at random examples of vertebrate and invertebrate marine life; several birds are also mentioned here. A reference list of half dozen pertinent technical books is included for those who might like to enlarge upon what they have gained from reading this work.

SVERDRUP, HARALD ULRIK, AND OTHERS

Oceanographic observations on the E. W Scripps" cruises of 1941 by H. U Sverdrup and the staff of the Scripps Institution of Oceanography Los Angeles University of California Press 1947 407 p illus 28 cm. (Scripps Institution of Oceanography Records of observations. Vol. 1, no 4) Paper $2.00 473

Contents: The "E. W Scripps" cruises of 1941—Cruises XVII to XXXIX. Charts 1–30. Tables of oceanographic observations, 1941 Table I—Interpolated and computed values. Table II—Plankton diatoms.

Note: A record in tabular form of the hydrographic results obtained from ten cruises off the coast of southern California. Fifty observing stations, described in terms of latitude, longitude, and depth, were occupied during each cruise, and at each station samples and soundings were taken of the salinity, temperature, and oxygen content of the water from 14 varying depths, zero to 500 meters. Computed values of σt, anomalies of specific volume, and dynamic depth are also included for each depth and station. Charts are given showing topography and temperature of the sea surface for the various cruises. The work is intended for professional oceanographers.

ZOBELL, CLAUDE EPHRAIM

Marine microbiology a monograph on hydrobacteriology Waltham Mass. Published by the Chronica Botanica Company 1946. 240 p illus. 27 cm. (A new series of plant science books edited by Frans Verdoorn. Vol. XVII) $5.00 474

Contents: Foreword, by Selman A. Waksman. General introduction. The marine environment. Collection and examination of samples at sea. Methods of enumerating marine bacteria. Factors influencing the distribution of bacteria in the sea. Microorganisms in bottom deposits. Activities of microorganisms in bottom deposits. Characteristics of marine bacteria. Aquatic yeast and molds. Transformation of organic matter. The nitrogen cycle in the sea. Bacteria which transform sulfur compounds. The phosphorus cycle. Relation of marine bacteria to flora and fauna. Microorganisms in marine air. Sanitary aspects of marine microbiology. Economic importance of marine microorganisms. Microbiology of inland waters. Bibliography. Author index. General index.

Note. Bacteria, in decomposing complex plant and animal residues and in liberating carbon, nitrogen, phosphorus, and other necessary elements in available forms, play an essential role in the organic life of the sea. The marine bacterial populations vary greatly in nature and in relative abundance, depending upon the geographical, climatic and other conditions, as well as upon the depth of the water, distance from shore, nature of sea bottom, abundance of plankton, water movement, and other factors. Marine microbacteriology is thus an essential branch of oceanography. This volume summarizes and correlates the extensive literature on the subject with particular reference to the importance of bacteria and allied microorganisms as biochemical, geological, and hydrobiological agents. The bibliography which covers 31 pages and lists publications in many languages, provides a key to the relevant literature. The book will be useful to bacteriologists, oceanographers, and all who are interested in the cycle of life in natural water bodies.

body cavity The digestive system. Food materials and metabolism. The respiratory and excretory systems. The circulatory system. The nervous system. The sense organs. The endocrines. Reproduction. Part Development and heredity Part vi, The organic world and its evolution Animals and plants in relation to their environment. The history of the theory of evolution. The mechanism of organic evolution. Early man. Appendix: A synoptic table of the plant and animal kingdoms. Index.

Note (1337) An inclusive textbook designed for use in full-length, introductory college courses. The treatment places emphasis on the scientific method and stresses phenomena and facts which can easily be verified in the college laboratory or from common experience. The additions and revisions in this edition include the addition of the chapter on the characteristics of living things, the expansion f the former chapter on the physical basis of life to form three chapters, and expansion of the discussion of the mechanism of evolution. The work is now one hundred pages longer A book based on this one but intended for short courses is the author's *A brief biology* New York The Macmillan Co., 1949 427 p., $4 00. Designed for use with the more comprehensive text is the author' *Laboratory exercises in general biology* third edition, New York The Macmillan Co 1947 131 p., $1.21.

SHULL AARON FRANKLIN

Principles of animal biology with the collaboration of George R. Larue and Alexander G Ruthven. Sixth edition. New York Mc Graw Hill Book Company, Inc., 1946 425 p illus. 24 cm. (McGraw Hill publications in the zoological sciences A. Franklin Shull, consulting editor) $4 00 487

Contents: The growth and scope of biology Primary organization of living matter Some fundamental physics and chemistry The functions of protoplasm and cells. Cell division. From one cell to many cells. Basic organization of the metazoa. Physical support and movement. Sources of energy and materials. Respiration and release of energy Transportation system. Disposal of wastes. Integration of activities. Reproduction The breeding behavior of animals. Embryonic development. Genetics. Principles of taxonomy The groups of animals. Animals and their environment. Geographic distribution. Fossil animals. Modification of species. Glossary Index.

Note: (1341) This introductory college text discusses the principles of animal biology under such headings as morphology physiology ecology taxonomy geographic distribution, paleontology and evolution. Function is emphasized in order to interest the student in living mechanism, and material on this subject is scattered through the physiological portions of the book. In this edition there has been some rewriting and further emphasis is given to function in such sections as those dealing with enzymes, photosynthesis, oxidation, breathing movements, blood composition, vitamins, and reflex arcs. Other changes include more detailed discussion of historical zoogeography and prehistoric man, and the addition of marine habitats to the chapter on ecology Names of the phases of mitosis, omitted in the third edition, have been restored.

STRAUSBAUGH PERRY DANIEL, AND BERNAL R. WEIMER

General biology Second edition. New York John Wiley & Sons Inc. 1947 718 p illus. (part col d) 22 cm. $5.00 488

Contents What is biology? Life—what is its nature? Metabolism. How do plants and animals adjust themselves to their environment? How do living organisms grow and reproduce? How do plants and animals inherit? How are plants and animals named and classified? The animal kingdom—what are invertebrates—what are chordates? The plant kingdom—what are thallophytes and bryophytes—what are pteridophytes and spermatophytes? How are living organisms related to their environment? What is evolution? Index and glossary

Note (1347b) An exceptionally inclusive textbook for beginning courses. Not only are there relatively full expositions of basic principles and descriptions of the major plant and animal groups, but biographical information, accounts of famous experiments, and other supplementary matter have been included. Compared to the first edition, the present one has been rewritten or enlarged in several parts, glossary and chapter on hormones have been added. There are now 350 figures, of hich about twenty are plates in color.

WOLCOTT, ROBERT HENRY

Animal biology Third edition. New York McGraw Hill Book Company Inc., 1946 719 p illus. 24 cm. (McGraw Hill publications in the zoological sciences A. Franklin Shull, consulting editor) $4.50 489

Contents (abridged) Part i, Fundamental principles. Part ii, The one-celled animals: the Protozoa. Part iii, Fundamental principles (continued) Part iv The multicellular animals the Metazoa. Part General considerations. Glossary List of visual aids. Index.

Note. (1348) A standard textbook for use in introductory college courses. This edition was prepared by the staff of the Department of Zoology of the University of Nebraska as memorial to the late author It has been rather extensively revised and many new illustrations added.

MARINE AND FRESHWATER BIOLOGY

ELLIS MAX MAPES, AND OTHERS

Determination of water quality by M M. Ellis, B A. Westfall, and Marion D Ellis. Washington, D C. Government Printing Office, 1946 122 p illus. 23 cm. (United States. Fish and Wildlife Service. Research report 9) Paper $0.30 490

Contents: Introduction. Collection and fixation of water samples. Dissolved oxygen. Oxygen demand and oxygen consumed. Specific conductance. Hydrogen-ion concentration, pH. Alkalinity and acidity Suspended matter Water hardness. Calcium and magnesium. Nitrogen determinations. Iron determinations. Manganese. Copper. Zinc. Sulfates. Sulfides, sulfites, and other non-sulfate sulfur compounds. Phosphate determinations. Fluorides. Chlorides. Chlorine. Acetylene. Special determinations. Exploratory tests. Fluorescence. Effluents and trade wastes. Evaluation of pollution hazards. Literature cited. Index.

Note In this pamphlet are presented methods for the determination of those characteristics of natural waters which are of major importance to the aquatic biologist in connection with fisheries problems. Both unpolluted and polluted waters are considered, and procedures for the evaluation of pollution hazards are outlined. Usually more than one method for each type of determination is offered. The methods chosen have been used by the authors in the Water Quality Laboratories of the United States Fish and Wildlife Service and in field operations, in most cases, over period of years. Aside from their intended use in aquatic biology many of the procedures would be applicable to problems in sanitary engineering and in trade waste disposal.

WELCH PAUL SMITH

Limnological methods. Philadelphia The Blakiston Company 1948 381 p illus 24 cm. $7.00 491

Contents Part i, Hydrographic mapping and morphometry: Shoreline surveys of lakes. Soundings Stream surveys. Water levels Map construction. Morphometry Part ii, Physical methods Temperature. Turbidity Color Water movement. Light penetration. Wind velocity Bottom materials. Part iii, Chemical methods: Selected chemical methods. Part iv Biological methods: Plankton methods. Bottom-fauna methods. Methods for plant-inhabiting organisms. Appendix Lines. Tables. Sources of hydrographic maps and hydrographic information. Location of lakes and streams. Accessory equipment. Sources of limnological apparatus and supplies. Rawson's nomogram. Literature aids in the identification of plankton. Index.

Note: A manual of basic and standard methods, most of which have been used by the author in his own work. A certain amount of the material is designed for the guidance of workers limited to simple methods and improvised equipment, but in most of the book professional methods and standard equipment are described and illustrated. Both field and laboratory procedures are given in considerable detail. There are about one hundred illustrations. Lists of the related literature are scattered throughout the book.

MICROSCOPY

BURTON ELI FRANKLIN AND W H KOHL

The electron microscope an introduction to its fundamental principles and applications. Second edition Drawings by Dorothy Stone.

New York Reinhold Publishing Corporation 1946 325 p illus. 23 cm. $4.00 492

Contents (abridged) Vision. Light microscopes. Wave motion and wave motion media. The electromagnetic theory of light. Electron emission. The dual theory of light. The dual theory of the electron. The motion of electrons in electrical fields. The motion of electrons in magnetic fields. Electron optics—magnetic focusing—electrostatic focusing. The electrostatic electron microscope. The magnetic electron microscope. The 1944 Toronto microscope. The use of the electron microscope. Practical applications of the electron microscope. Bibliography of electron microscopy. Indexes.

Note: (1934) This book is for lay readers who have some background in science and for scientists interested in the uses and manipulations of the electron microscope but who are not specialists in electron optics. The present edition contains nearly one hundred more pages than the 1942 edition. Besides extensive textual revision, many excellent reproductions of microphotographs have been added. Also included is a noteworthy bibliography of some 533 entries which, apart from a few recently added references, first appeared in the August, 1944, issue of the *Journal of applied physics*.

CONN HAROLD JOEL, AND OTHERS

Biological stains a handbook on the nature and uses of the dyes employed in the biological laboratory Prepared with the collaboration of J A. Ambler R. W French W C. Holmes S I. Kornhauser F B Mallory L. W Sharp. Fifth edition. Revised with the assistance of John T Scanlan, Anis P Bradshaw and Mary A. Darrow Biological Stain Commission. Geneva, N Y Published by Biotech Publications 1946 346 p illus. 21 cm. $4.25 493

Contents: Uses and standardization of biological stains. The general nature of dyes and their classification. The spectrophotometric analysis of dyes. Miscellaneous dyes, especially the azo group. The quinone-imine dyes. The phenyl methane dyes. The xanthene dyes. Natural stains. The natural dyes and mineral pigments. The theory of staining. *Appendices:* Tables relating to stains. Methods for testing biological stains. General laboratory information. Bibliography. Index.

Note: Biological stains are dyes adapted to special purposes, chiefly that of making microscopic objects more clearly visible than they would be unstained. This book is a handbook of these specialized dyes and to a lesser extent on the related dyes used in biology which are not stains, including medicinal dyes, bacteriostatic agents, and indicators. It was prepared by the Commission on Standardization of Biological Stains. The fifth edition has been extensively rewritten and about 21 more dyes are included than in the fourth edition. The publication of *Staining procedures*, described below, made unnecessary the inclusion in this edition of recommended methods of staining.

CONN, HAROLD JOEL, AND MARY A. DARROW compilers

Staining procedures used by the Biological Stain Commission. Compiled and edited by H. J Conn and Mary A. Darrow Biological Stain Commission with the assistance of numerous members of the Commission. Geneva, N Y Published by Biotech Publications, 1946 Various paging. 23 cm. Paper $2.50 leather $4.25 494

Contents: Part I, Animal histology: Methods for general tissues. Methods for connective tissues. Neurological staining methods. Miscellaneous methods. Part II, Plant microtechnic: General methods. Cytology. Part III, Microorganisms: Stains for microorganisms in smears. Stains for microorganisms in sections. Index.

Note: This loose-leaf publication presents in standardized form the various staining methods used by members of the Biological Stain Commission. Wherever possible each procedure listed includes reference to show the source from which it is taken; when two references are given, they indicate the first and the latest appearance of the particular technique. In addition, each of the sections contains a complete bibliography of its particular subject. These approved staining methods formerly were included as part of the publication *Biological stains* (see above) but with the publication of the fifth edition of that title, *Staining procedures* became a separate publication, reference being given to it in the parent work.

ZWORYKIN VLADIMIR KOSMA, AND OTHERS

Electron optics and the electron microscope by V K. Zworykin G A. Morton, E. G Ramberg J Hillier and A. W Vance. New York John Wiley & Sons, Inc., 1945 766 p. illus. 22 cm. $10.00 495

Contents: Part I, Practical electron optics and electron microscopy: Electron optics. Applications of electron optics. Electron microscopes. Electron optics of high magnification. The magnetic electron microscope. Aberrations and tolerances in the electron microscope. Electron microscope power supplies. Manipulation of the electron microscope. The electron microscope as a research instrument. Part II, Theoretical basis of electron optics and the electron microscope: Theoretical basis of electron optics. Determination of potential distribution. Electron trajectory tracing. Gaussian dioptrics of electrostatic lenses. Magnetic fields. Electron motion in magnetic fields and magnetic lenses. Aberrations of electron lenses. Magnitude and correction of electron lens defects. High-voltage electron optics—ion optics. Image formation in the electron microscope. *Appendix:* The problem of noise in amplification and in the scanning microscope. Miscellaneous tables. Author index. Subject index.

Note: The first part of this comprehensive and authoritative treatise is intended for users of electron microscopes, hence it deals with the general principles of electron optics and with the features of electron microscopes available at the time of preparation of the manuscript. In this part only simple mathematics is employed. Part II is intended chiefly for persons interested in the design and improvement of electron microscopes. Accordingly it provides an extensive survey of both the theoretical and practical knowledge, and higher mathematics is employed. Bibliographies accompany all but one of the chapters, and there is a liberal amount of illustrative matter.

GENETICS

ADVANCES IN GENETICS. Volume I & II. Edited by M Demerec. New York Academic Press, Inc., publishers, 1947 illus. 23 cm. $7.50 each volume. 496

Contents: Volume I: Cytogenetics and breeding of forage crops, by Ledyard S. Atwood. Cytogenetics and speciation in Crepis, by Ernest B. Babcock. Speciation in fishes: Distribution in time and space of seven dominant multiple alleles in *Platypoecilus maculatus*, by Myron Gordon. Immunogenetics, by M. R. Irwin. The origin and evolution of maize, by Paul C. Mangelsdorf. The genetics of cattle, by R. R. Shrode and J L. Lush. Recent advances in the genetics of Paramecium and Euplotes, by T M. Sonneborn. Mutations in wild populations in Drosophila, by W P Spencer. Types of polyploids: their classification and significance, by G. L. Stebbins, Jr. Cytogenetics of Gossypium and the problem of the origin of new world cottons, by S. G. Stephens. Author index. Subject index. Volume II: Cytoplasmic inheritance, by B. Caspari. Genetics of human populations, by Gunnar Dahlberg. Genetics of cancer by W E. Heston. Cytology of coccids (Coccoidea-Homoptera) by S. Hughes-Schrader. The bearing of the new systematics on genetical problems. The nature of species, by E. Mayr. The cytology and genetics of the wheats and their relatives, by E. R. Sears. Genetic effects of radiations, by D. G. Catcheside. Author index. Subject index.

Note. The first two volumes of a series that is designed to provide summaries, on the professional level, of current research and recent advances in genetics. Each paper is written by a recognized authority and is in effect a monographic survey of the recent literature of its topic. Extensive, keyed reference lists accompany each paper.

ALTENBURG EDGAR

Genetics. New York Henry Holt and Company 1945 452 p illus. 22 cm. $3 90 497

Contents: The physical basis of heredity. Heredity and environment. Mendel's principle. Independent assortment. Multiple factors. The determination of sex. Inbreeding and outbreeding. The genetical interpretation of sex. Selection. Linkage, crossing over, and chromosome maps. Crossing over and meiosis. Multiple alleles. Abnormal chromosomal rearrangements. Cytogenetic maps. Genic balance and chromosome number. Mutation. The artificial production of mutations. Balanced lethals and chromosome complexes. Heredity and development. The genetic basis of evolution. Index.

Note This text, designed for students with background of general college biology considers genetics as the "study of the germ plasm. The author was among the pioneer investigators in the Drosophila experiments at Columbia University from 1911 to 1916 the influence of which is strongly indicated in this study. In the introductory chapters explanations are made with care and in detail, with an especially full treatment of the Mendelian principles later the pace is considerably more rapid and the material would be of little use to the layman studying alone. Human genetics is not considered separately as such, but is treated topically with other forms of life. There are helpful summaries and sets of problems following each chapter but no bibliographical references.

CLAUSEN JENS CHRISTIAN, AND OTHERS
Experimental studies on the nature of species II. Plant evolution through amphiploidy and autoploidy with examples from the Madiinae by Jens Clausen, D D Keck, and W M Hiesey Washington, D C. Carnegie Institution of Washington, 1945 174 p illus 25 cm. (Carnegie Institution of Washington. Publication 564) Paper $1.25 cloth, $2 00 498

Contents: Glossary of important terms. Introduction. Madia nutammii. Madia citrigracilis. Layia pentaglossa. Biosystematic relationships and amphiploidy. Classification of experimental polyploids on biosystematic principles. Ecologic characteristics of natural amphiploids. Ecologic characteristics of natural autoploids. Taxonomic and evolutionary aspects of amphiploidy and autoploidy Literature cited. Index.

Note The second volume in this series of experimental plant studies pictures the building of plant species through multiplication of the chromosome sets within the limits of one species (autoploidy) and through the addition of all the chromosomes f two distinct species (amphiploidy). On the basis of their own investigations of the patterns of speciation in the Madiinae, subtribe of the Compositae the authors assemble representative material from contemporary literature and examine the evolutionary patterns disclosed

GOLDSCHMIDT RICHARD BENEDICT, AND OTHERS
A study of spontaneous mutation with the collaboration of Richard Blanc, Werner Braun Mary M. Eakin Ruth Fields Aloha Hannah, Leonie Kellen, Masuo Kodani and Claude Villee. Berkeley University of California Press 1945 170 p illus. 26 cm. (University of California. Publications in zoology Vol. 49 no 10) $3.00 499

Content (abridged) Introduction. The starting point. Analyses of the pr bl stock and the mutants in the region of primary changes (ev pr, bs,) Tentative X ray experiments Discussion. Summary Bibliography

Note The results of long series of experiments with *Drosophila* which were made to throw light on the mechanism of spontaneous mutation are reported in this work In the opinion of the author they show that mutation is not haphazard event but is caused in an orderly manner by conditions within the chromosomes He cites as evidence numerous examples of "mass" mutations, or mutations hich occurred with extraordinary frequency in succeeding generations, and also the clearly marked tendency for these mutations to occur at specific loci in the chromosomes. He offers the theory that mutations are due to mechanical rather than chemical happenings within the chromosomes.

PATTERSON, JOHN THOMAS AND OTHERS
Studies in the genetics of Drosophila. V Isolating mechanisms Directed by J T Patterson. Austin, Tex. University of Texas, 1947 184 p. illus. 26 cm. (The University of Texas publication no 4720) Paper $2.00 500

Contents: Sexual isolation between members of the virilis group of species, by J T Patterson and others. Sexual isolation in the mulleri subgroup, by J T Patterson. The insemination reaction and its bearing on the problem of speciation in the mulleri subgroup by J. T Patterson. The insemination reaction in intraspecific matings of Drosophila, by M. R. Wheeler Two strains of *Drosophila peniculata* with incipient reproductive isolation, by J T Patterson and M. R. Wheeler A study of the isolating mechanisms found in *Drosophila arizonensis* and *Drosophila mojavensis* by W K. Baker Relationships within the quinaria species group of Drosophila, by W J Sears. The species relationships in the virilis group, by W S. Stone and J T Patterson. Gene replacement in the virilis group by W S. Stone. Interrelationship between eye color and facet arrangement in Lozenge alleles of *Drosophila melanogaster* by C. P Oliver

Note (1376b) The ten papers in this large pamphlet continue the reports of fundamental investigations in genetics, based on use of the fruit fly Drosophila, as experimental material. As in earlier collections of this series, the papers are supplemented by illustrations, charts, and lists of pertinent literature.

RIDDLE, OSCAR
Endocrines and constitution in doves and pigeons. Washington D C. Carnegie Institution of Washington, 1947 306 p illus. 25 cm. (Carnegie Institution of Washington. Publication 572) Paper $3 00 cloth $4.00 501

Contents Part I Introduction. Body weight in dove and pigeon races and in hybrids. The establishment of "thyroid" races in doves. The unequal response of races to prolactin. The establishment of dove races with unequal intestinal length with consideration of unequal pituitary size in dove and pigeon races. Liver size in study of races. Age at sexual maturity as racial character. Testis weight as racial character Egg eight as racial trait. A race of hermaphrodite-producing pigeons. Data on weight of heart, skeleton, and plumage in certain races and hybrids of doves and pigeons. Part General statement on basal heat production. The role of race in heat production. Season and temperature as factors in heat production in doves and pigeons. The role of sex in heat production. Organs having special relations to heat production. The influence of age on metabolism. Concluding statement.

Note A detailed report of research conducted over period of twenty-four years with the purpose of adding to the knowledge of inherited constitutional differences that characterize races and individuals. Doves and pigeons were selected as experimental animals because (among other reasons) "the degree of mongrelization present in each of these species is apparently comparable with that in the human population of an American city and that many facts relating to constitutional factors in these birds are probably applicable to man.

RILEY HERBERT PARKES
Introduction to genetics and cytogenetics. New York John Wiley & Sons Inc. 1948 596 p illus. 22 cm. $5.00 502

Contents (abridged) Genetics, cells, and chromosomes Genes and characters Reproduction and meiosis. The genetic distribution of pair of alleles located in autosomes. Probability The distribution of two or more pairs of alleles in two or more chromosomes. Locating genes on chromosomes. Miscellaneous linkage topics. The nature of and changes in genes. The induction of gene mutations. Radiation, evolution and the position effect. Multiple alleles Blood groups. Interaction of genes Inbreeding, selection, and heterosis. Intrachromosomal aberrations. Aneuploids and nondisjunction. Haploids and autopolyploids. The origin of polyploids. The determination of sex. Cytogenetics and evolution. General references. Specific references. Author index. Subject index.

Note Although designed chiefly as textbook for use in introductory courses in genetics in colleges, this work is suitable also for the scientifically trained general reader who is in need of compact authoritative summary of modern knowledge of the mechanism of heredity The first five chapters are basic and elementary In the rest of the book the findings and the methods of modern experimental investigations in genetics are presented. Here the treatment is more advanced, but still not over the head of the serious reader A set of questions and problems follows each chapter The general bibliography includes modern books of interest in the field. The specific bibliography is arranged by chapter and refers chiefly to periodical articles. It runs to more than twenty pages.

SHULL, AARON FRANKLIN

Heredity Fourth edition New York Mc Graw Hill Book Company, Inc., 1948 311 p. illus. 23 cm. (McGraw Hill publications in the zoological sciences A Franklin Shull, consulting editor) $4 00 503

Contents (abridged) Rise of modern genetics. Origin of new individuals. Mechanism of heredity Dominance. Backcross and test cross. Sex-linkage. Multiple alleles. Lethal characters. Interactions of genes. Modification by environment. Linkage. Nature and action of genes. Non-Mendelian inheritance. Determination and development of sex. Inheritance of human structural characters. Human heredity—physiological characters. Inheritance of mental characters. Applied genetics. Eugenics. The population problem. Race and immigration. Appendix Quantitative characters. List of visual aids. Index.

Note: (1377) A standard, long-established textbook for introductory college courses. The relationship of genetics to evolution and to current social problems such as race is emphasized. In this edition information has been added on the Rh factor on the biochemical effects of gene mutation, and on the practical applications of genetic knowledge. Other changes are numerous but comparatively minor

SNYDER, LAURENCE HASBROUCK

The principles of heredity Third edition. Boston D C. Heath and Company 1946 450 p. illus. 23 cm. $4.00 504

Contents (abridged) The study of heredity Simple Mendelian inheritance. Crosses involving two pairs of factors. Modified two-factor ratios. Probability Sex-linked factors. Lethal factors. Multiple alleles Sex-influenced factors. Sex-limited factors. Linkage. The cytological basis of crossing over The mapping of chromosomes. Quantitative inheritance: Multiple factors—statistical treatment. Selection and inbreeding. The genetics of domestic animals. The genetics of cultivated plants. Chromosomal aberrations. The proof of the hypothesis that the hereditary factors are carried in the chromosomes. Giant chromosomes. The mutant gene in man. Eugenics. The analysis of human family histories. Index.

Note: (1379) A short basic text, primarily for college students but suitable also for the serious general reader. The present edition includes considerable re-arrangement of topics and re-writing of material in the chapters on biometry, eugenics, and human inheritance. Minor changes and additions include discussion of the Rh factor equilibrium in random-breeding populations, *Neurospora*, and others. References listed at the end of chapter discussions have also been revised to include recent publications pertinent to the text.

BIOLOGICAL PHYSICS

ADVANCES IN BIOLOGICAL AND MEDICAL PHYSICS Volume I. Edited by John H. Lawrence and Joseph G Hamilton New York Academic Press, Inc., publishers, 1948 484 p illus. 23 cm. $8 60 505

Contents Heavy and radioactive isotopes in clinical and experimental medicine, by E. C. Dougherty and J H. Lawrence Nitrogen and carbon isotopes—their application in vivo to the study of the animal organism, by D. Rittenberg. The nature and production of artificial radioactivity by W E. Cohn. Fundamentals of radioactivity and its instrumentation, by R. D Evans. Health physics, instrumentation, and radiation protection, by H. M. Parker. The use of radioactive isotopes in the study of iron and hemoglobin metabolism and the physiology of the erythrocyte, by P F Hahn. Radioactive phosphorus—its application to the study of phospholipid metabolism, by I. L. Chaikoff and D. B. Zilversmit. Iodine metabolism, by C. P Leblond. The effects of the atomic bomb irradiation on the Japanese, by J W Howland and S. L. Warren. Nucleic acid metabolism, by G. Hevesy Author index. Subject index.

Note: The first issue of a series that will review annually selected recent developments in nuclear physics that are of interest in biology and medicine. Each paper is prepared by a specialist and is presented in the style of a monograph with exact references to the pertinent literature.

HEVESY GEORGE

Radioactive indicators their application in biochemistry animal physiology and pathology New York Interscience Publishers, Inc., 1948 556 p illus. 23 cm. $6.50 506

Contents: Production of radioactive indicators. Radioactive isotopes of possible interest in tracer work. Determination of radioactivity Atomic interchange. Application of isotopic indicators in chemical analysis. Absorption, distribution, and excretion of elements. Application of isotopic indicators in the study of permeability of phase boundaries. Turnover studies. Path of intermediary reactions. Skeleton metabolism. Application of radioactive indicators in the study of red corpuscles. Shortcomings of radioactive indicators. Author index. Subject index.

Note: A survey based on study of the literature, most of which was published during the years 1940–1947 Approximately 900 footnote references, keyed to the text, are included. A second volume dealing with the uses of radioactive indicators in plant physiology is planned. The book is directed at research workers in biology and medicine.

KAMEN MARTIN DAVID

Radioactive tracers in biology an introduction to tracer methodology New York Academic Press Inc., 1947 281 p illus. 24 cm. (Organic and biological chemistry a series of monographs, edited by L. F Fieser and Mary Fieser Vol. I) $6.80 507

Contents: Atomic nuclei and radioactivity Production of radioactive isotopes. Radiation characteristics of tracer atoms. Procedures for radioactive assay Survey of tracer methodology Radioactive hydrogen (tritium, H^3). Short-lived radioactive carbon(C^{11}) Long-lived radioactive carbon(C^{14}) Radioactive phosphorus(P^{32}) Radioactive sulfur(S^{35}) Alkali metal and alkaline earth tracers. Tracer isotopes of halogens. Various radioactive isotopes of importance in biology Visualization techniques and medical applications. Index.

Note: An abundant supply of radioactive isotopes suitable for use in biological research is probably the most important by-product of the development of the atomic bomb. Radioactive isotopes of elements such as carbon make possible a wholly new range of experiments in physiological processes and in chemotherapy This work is an introduction to the principles of radioactivity and to research techniques involving the use of radioactive tracers. It surveys existing tracer methods, evaluates their application to biological problems, and reviews at length the preparation, properties, and methods of using the more important radioactive isotopes. The book is intended for biologists and other trained persons who are engaged in biological research and is therefore written in technical language.

RASHEVSKY, NICOLAS

Mathematical biophysics. Revised edition. Chicago Illinois The University of Chicago Press 1948 669 p. illus. 25 cm. $7.50 508

Contents (abridged) Mathematical biophysics of vegetative cells: The diffusion equation. Spherical cell constant rate of reaction. An interesting case of connected chemical reactions: application to cell respiration. A kinetic theory of diffusion forces. Mechanical stability of metabolizing systems. Application of the approximate method to the theory of cell division. Cellular growth. Outline of a mathematical approach to the cancer problem. An approach to the mathematical biophysics of biological self-regulation and of cell polarity. Mathematical biophysics of excitation and conduction in peripheral nerves: Blair's theory of excitation. Rashevsky's theory of excitation and inhibition. Hill's theory of excitation. Mathematical biophysics of nerve conduction. Mathematical biophysics of the central nervous system. General considerations on central excitation and inhibition. Mathematical biophysics of psychophysical discrimination. A neurologically interesting case of hysteresis. Mathematical biophysics of the Gestalt problem. Mathematical biophysics of rational learning and thinking. Perception of visual patterns and visual aesthetics. Boolean algebra of neural nets. The organism as a whole and the organic world as a whole: Outline of a new mathematical approach to general biology Locomotion and form of snakes. Flight of birds and insects in relation to their form. The organic world as a whole. Index.

Note (1381) Mathematical biophysics seeks to interpret biological phenomena in terms of mathematical and physical concepts. Its proponents think of it as standing in the same relation to experimental biology as mathematical physics stands to experimental physics. In preparing the second edition the length of the work was almost doubled in comparison to the first edition. Much of the new material is concerned with further applications of the concepts and mathematical techniques which were exploited in the first volume. The work continues to be the most comprehensive exposition of the subject available. It is of interest primarily to other workers in the field.

SPIEGEL ADOLF, MONA, AND GEORGE C HENNY

X-ray diffraction studies in biology and medicine. New York Grune & Stratton 1947 215 p. illus. 23 cm. $5.50 509

Contents (abridged) Theory of X-ray diffraction. X-ray diffraction apparatus and techniques. Interpretation of X-ray diffraction patterns. X-ray diffraction studies on Carbohydrates. Amino acids and derivatives. Proteins. Nucleic acids and nucleoproteins. Muscle. Lipides. Nerves. Steroids. Bones, teeth and concretions. Index of authors. Index of subjects.

Note A description of X-ray diffraction techniques and apparatus as applied in biological and medical research. Basic principles and methods are discussed but emphasis is placed on the preparation and interpretation of X-ray diffraction patterns of some of the chief constituents of human and animal bodies. The book is intended to serve as manual for the guidance of research workers, and each chapter concludes with an extensive bibliography

A SYMPOSIUM ON THE USE OF ISOTOPES IN BIOLOGY AND MEDICINE, by Hans T Clarke and others. Madison The University of Wisconsin Press, 1948 445 p illus 24 cm. $5.00 510

Contents: Address of welcome, by W A. Middleton. Isotopes in biochemistry: historical background, by H. T Clarke Separation of stable isotopes, by H. C. Urey The preparation of radioactive isotopes, by G. T Seaborg. Recent developments in the availability of isotopes, by P C. Aebersold. The detection of stable isotopes, by A. O. Nier Fundamental principles of the detection and measurement of radioactivity by C. D Coryell. Assay of radioactive isotopes in biological research, by M. D Kamen. Preparation of compounds containing isotopes, by D B. Melville. Studies on the metabolism of proteins, by D B. Sprinson. The use of isotopes in the study of intermediary carbohydrate metabolism, by H. G. Wood. The intermediary metabolism of lipids, by K. Bloch. Tracer studies on the metabolism of mineral elements with radioactive isotopes, by D. M. Greenberg. Application of radioactive iodine to studies in iodine metabolism and thyroid function by I. L. Chaikoff and A. Taurog. Medical applications of radioactive tracers, by J. G. Hamilton. Therapeutic use of radiophosphorus in polycythemia vera, leukemia, and allied diseases, by B. K. Hall. Treatment of thyroid disease by means of radioactive iodine, by S. Hertz. Health hazards in the use of radioactive isotopes, by W F Bale. Measures for the protection of property and personnel, by J J Nickson. International aspects of atomic energy by H. C. Urey Comments on the development of atomic energy by F Daniels. Panel discussions on special topics.

Note. The papers comprising this volume were prepared by leading physicists, chemists, and biologists at conference sponsored by the Wisconsin Alumni Research Foundation in 1947 Taken as whole they provide review of the developments in atomic physics that are especially applicable in the fields of biology and medicine. References are given at the end of each chapter but there is no index.

BOTANY

GENERAL

ASCH JOHN

The story of plants. Illustrated by Tabea Hofmann. New York G P Putnam's Sons 1948. 407 p illus 22 cm. $5.00 511

Contents (abridged) Part 1. Life The sun and the earth. The atom. Water—the life-giving fluid. What is food? Climate. Part II. The natural history of plants The most wonderful substance in the world. Two blades of grass where one grew before. Each one is named after its kind. The record of the rocks. Evolution. First plants. Lichens. Naked-seed plants. Venerable cycads and idolized ginkgos. Floral structures. Major groups of flowering plants. Migration of plants. A new plant is born. Part III Plants and man W select the best. Production of seeds. Propagation and grafting. The golden harvest. Notes on botanical and agricultural publications. Index.

Note A survey of the entire field of botany It is written in narrative style and is designed to attract the general reader as well as senior high school and junior college students. When used by students it is more suitable as collateral reading than as formal textbook, since it is totally lacking in exercises, review questions, and other customary apparatus of such books. Much of the space is devoted to readable descriptions of major plant groups, but discussions of the physiological, geological, economic, and social aspects of plants are skillfully interspersed. There are approximately 200 illustrations and full index, but there is no bibliography

FAIRCHILD DAVID

The world grows round my door the story of the Kampong, a home on the edge of the tropics. New York Charles Scribner's Sons, 1947 347 p. illus. 24 cm. $5.00 512

Contents (abridged) Waves of ... First day on the Kampong. The great freeze. Doom along the Tamiami trail. Plants that climb. Some nesting habits of ... Banyan tree and jumble bean. Among the palms on the Kampong. There ... no disorder in jungle. A plant breeder's moments. Keeping their noses straight. Learning to like granddaddy's new fruits. The gorgeous East Indian mango. Stories of some Kampong trees. The ages of trees. Index.

Note Travels in foreign lands and the author's home in southern Florida constitute the background of this fascinating autobiography The real "dramatis personae" in this setting, however are the many tropical and subtropical trees, bushes, and flowers transplanted by Dr Fairchild to his garden. The vivid narrative, interspersed with philosophical reflections and descriptive details and the many excellent photographs, makes this book by well known botanist pleasant and stimulating reading.

MERRILL ELMER DREW

Merrilleana, a selection from the general writings of Elmer Drew Merrill. Waltham Mass. Chronica Botanica Co 1946 393 p. illus. 26 cm. (Chronica botanica. Vol. 10 nos. 3 and 4) Paper $4.00 513

Contents: The ascent of Mount Halcon. Amboina floristic problems in relation to the early work of Rumphius. Comments on Cook theory as to the American origin and prehistoric Polynesian distribution of certain economic plants, especially Hibiscus tiliaceus Linnaeus. On the flora of Borneo. Die Pflanzengeographische Scheidung von Formosa und den Philippinen. An appeal for simplified literature citations. Correlation of the indicated biologic alliances of the Philippines with the geologic history of Malaysia. Logrowny ... to science. One-name periodicals. On Loureiro's "Flora Cochinchinensis." Scattering Atlantis and Mu. Palisot de Beauvois as an overlooked American botanist. On the technique of inserting published data in the herbarium. On the significance of certain Oriental plant names in relation to introduced species Domesticated plants in relation to the diffusion of culture. Index Kewensis in improved loose leaf ledger form. A simple change in name. Man's influence on the vegetation of Polynesia, with special reference to introduced species. Some economic aspects of taxonomy Rafinesque' publications from the standpoint of world botany Sir David Prain (1857–1944) In defense of the validity of William Bartram binomials. Further notes on tobacco in New Guinea.

Note Representative writings of an eminent American botanist who is now the Arnold Professor of Botany at Harvard University are collected in this volume without change in their texts from the original publications. References are given to the original appearances in journals. Also included is condensed chronological tabulation of the outstanding events in the author' life and bibliography of all of his writings.

RICKETT HAROLD WILLIAM

The Royal Botanical Expedition to New Spain 1788–1820 as described in documents in the Archivo General de la Nación [Mexico] now translated and collated by Harold William Rickett. Waltham Mass. Chronica Botanica Co 1947 86 p. illus. 26 cm. (Chronica botanica. Vol. 11 no 1) Paper $2.50 514

Content Sessé: Establishment of the Royal Botanical Garden. Mociño: Exploration of Mexico. Sessé: The West Indies. Longinos Martínez Mutiny in the expedition. Cervantes: The Botanical Garden and the teaching of botany Sessé and Mociño: Return to Spain. Appendices: Plants introduced into the Royal Botanical Garden of Mexico. Names and dates of certain graduates of the course in botany of the Royal Botanical Garden. References. Index.

Note From the incomplete evidence preserved in the Archivo General de la Nación of Mexico the author has compiled vivid account of the expedition sent by King Charles III of Spain in 1787 to survey the flora and fauna of New Spain and to establish botanical garden. The report, meant primarily as contribution to the history of botany sheds also an interesting light on the relation between government and science during that period.

WAIT LUCITA HARDIE

Fairchild Tropical Garden the first ten years. New York The Ronald Press Company 1948 381 p. illus. 21 cm. $3.00 515

Contents (abridged) How the garden got its start. Early plantings. The Sample vine collection. The buildings. The expeditions. The Bailey palm glade. The palm products museum and its contents. The library and its books. Publications. The plant and seed distributions. The staff. Finances. Looking forward. Appendix: Trees and plants donated during the ten years.

Note The Fairchild Tropical Garden, near Miami, Florida, was established in 1938 with the view of maintaining, for purposes of display and study representative collection of tropical flora. The garden is particularly noted for its extensive collection of palms and related families of trees. This volume traces the development of the garden and serves as history and record of what has been accomplished during the first decade of operation.

WYMAN DONALD

The arboretums and botanical gardens of North America. Waltham Mass Chronica Botanica Co. 1947 395–484 p illus. 26 cm. (Chronica botanica. Vol. 10 nos 5–6) Paper $1.50 516

Contents How to establish an arboretum or botanical garden. The active arboretums and botanical gardens of North America, listed according to geographical distribution. A portfolio of prints

and photographs of botanical gardens and arboretums, old and modern. Proposed arboretums and botanical gardens. Arboretums or botanical gardens which have been discontinued. Alphabetical index of arboretums and botanical gardens described in this directory. Small collections of special plants. Bibliography. Index of place names.

Note The directory of active arboretums and botanical gardens which is included in this work accounts for approximately half of its length. In general the following information is given for each establishment: address, chief function, special features, species and varieties of plants, operating budget, terms of admission, name of director, size of staff, size of library, special events sponsored, and publications. The nature of the rest of the book is obvious from the table of contents quoted above.

YOCUM, LAWSON EDWIN

Plant growth. New York The Ronald Press Company 1945 203 p illus 24 cm. $3 00 517

Contents (abridged) Seeds and seedlings. Cell structure and protoplasm. Roots. Absorption of water and mineral salts. The soil. Stems and buds. Pruning and training plants. Propagation. Leaf structure. Food making. Transpiration. Insects and diseases. Weeds. Flowers. Hybridizing plants. Heredity and variation in plants. Plant hormones. Fertilizers. Rest period of plants. Glossary

Note An easy-to-read book in which an exposition of elementary botany is combined with some essentials of successful gardening. It is addressed chiefly to persons whose curiosity about plants and plant life is aroused by their interest in home gardening.

TEXTBOOKS

DAUBENMIRE, REXFORD F

Plants and environment a textbook of plant autecology New York John Wiley & Sons Inc., 1947 424 p illus. 22 cm. $4.50 518

Contents: Introduction. The soil factor The water factor The temperature factor The light factor. The atmospheric factor The biotic factor The fire factor The environmental complex. Ecologic adaptation and evolution. Literature cited. Index.

Note An interesting, well-organized survey of the effects of environmental factors upon plant life. It is more detailed than the chapter titles indicate for example some of the subtopics in the chapter entitled "The atmospheric factor" are gas exchange between plants and the atmosphere factors that affect soil aeration; injuries to plants by wind, salt spray and snow pollination and plant dissemination by wind. The bibliography contains 612 references. The work is designed as college textbook but other groups such as foresters and amateur naturalists will find it of interest.

EAMES, ARTHUR JOHNSON AND LAURENCE H. MACDANIELS

An introduction to plant anatomy Second edition New York McGraw Hill Book Company Inc., 1947 427 p. illus. 23 cm. (Mc Graw Hill publications in the botanical sciences, Edmund W Sinnott, consulting editor) $4.50 519

Contents: Introductory: General structure of the plant body—an outline. General histology The cell. Meristems. Tissues and tissue systems. The primary body The secondary body: The origin and development of the secondary body and its relation to the primary body The cambium. Secondary xylem. Secondary phloem. Periderm and rhytidome. The organs: The root. The stem. The leaf. The flower The fruit. The seed. Ecology: Ecological anatomy Index.

Note. A well-organized and illustrated textbook designed for first college courses. Extensive lists of the pertinent literature give it some value as reference book also. The first edition was published in 1925 and fairly extensive changes have been made in this edition to bring it abreast of current knowledge. The authors are professors at Cornell University

HAUPT, ARTHUR WING

An introduction to botany Second edition. New York McGraw Hill Book Company Inc., 1946 425 p. illus. 21 cm. (McGraw Hill publications in the botanical sciences Edmund W Sinnott, consulting editor) $3 75 520

Contents (abridged) Part I, The structure, functions, and life relations of seed plants: The plant cell. Protoplasm. The root. The stem. The leaf. Metabolism and irritability Environmental relations. The flower and fruit. Seeds and seedlings. Heredity and plant breeding. Part II, The evolution of the plant kingdom. Thallophytes—Algae. Bryophytes. Pteridophytes. Spermatophytes. Chief families of flowering plants. Plant life of the past. The principle of evolution. Index.

Note. (1419) A standard textbook for college courses. In this first major revision new text has been added to the first three chapters and to each of the chapters in Part II that deal with principal plant groups. Greater emphasis is now placed on the economic aspects of botany and that part of the work concerned with root, stem, and leaf structures and functions has been rearranged and rewritten.

KERN, FRANK DUNN

The essentials of plant biology New York Harper & Brothers 1947 440 p illus 24 cm. $4 00 521

Contents: Part I, The manifestation of life (individual maintenance) The food supply of plants (nutrition) How plants use their food (assimilation, respiration) The organization of plant bodies (protoplasm, cells, vegetative organs) The internal structure and development of vegetative organs (anatomy growth) The supply of raw materials (absorption, conduction) Reaction of plants to their environment (irritability adaptedness) The culture and protection of plants (cultivation, diseases, pests) Part II, The perpetuation of life (racial preservation) The formation of new individuals (reproduction) Reproduction through flowers (pollination, embryogeny) Dispersal and establishment of the progeny (dissemination, germination associations) The continuity from parent to offspring (cell division, heredity) The improvement of plants by man (plant breeding) The development of the various kinds of plants (evolution) The purpose and method of classification (taxonomy) Supplement The plant kingdom (the great groups of plants) Index.

Note A well-illustrated, thoroughly modern introductory textbook. It is intended for use in one-semester college courses. Taxonomy is considered only briefly and most of the book is devoted to the physiology life cycles, and economic uses of plants. The author is Professor of Botany and Dean of the Graduate School of the Pennsylvania State College.

SINNOTT, EDMUND WARE

Botany principles and problems. Fourth edition. New York McGraw Hill Book Company Inc. 1946 726 p. illus. 24 cm. (Mc Graw Hill publications in the botanical sciences, Edmund W Sinnott, consulting editor) $4.50 522

Contents (abridged) The science of botany The cell. The root and its functions. The leaf and its functions. The stem and its functions. Metabolism. Growth. Development and morphogenesis. The plant and its environment. Reproduction. Heredity and variation. Plant evolution Plant distribution. The plant kingdom. The Thallophyta. The Bryophyta, by Hempstead Castle. Vascular plants (Tracheophyta) The Gymnosperms. The Angiosperms. Botany and the future. Appendix. Index.

Note (1424) A standard American college text. Throughout the book the plant is studied as functioning structure and problem work is emphasized. This edition has been considerably revised and enlarged to incorporate the newer knowledge regarding such topics as antibiotics, plant tissue culture, allometric growth, hydroponics, use of "tagged" atoms, and vitamin physiology More space is devoted to the economic importance of plants and their products, and chapter on plant distribution has been added. The appendix now includes list of the more important Greek and Latin roots used in the construction of botanical terms.

SWINGLE, DEANE BRET

A textbook of systematic botany Third edition. New York McGraw Hill Book Company, Inc., 1946 343 p illus. (part col d) 22 cm. (McGraw Hill publications in the botanical sciences Edmund W Sinnott, consulting editor) $3.50. 523

Contents: Evolution in relation to taxonomy Methods used in the identification of flowering plants. The preparation of herbaria. The terminology of systematic botany General features of Spermatophyta. Families of gymnosperms. Families of dicotyledons. Families of monocotyledons. Nomenclature. Principles of taxonomy Systems of taxonomy The literature of systematic botany Index.

Note: (1427a) A college text covering the principles of taxonomy and nomenclature as applied to botany The book is designed for one-semester course with course in general botany as prerequisite. The new edition has been changed so that actual study of plant groups precedes study of abstract principles. The material is so organized, however that following study of the first two chapters the others may be taken up in almost any order General revision of most chapters has been done in consultation with other taxonomists and new chapter added on methods of identification. A selected and annotated list of articles, monographs, books, etc. which will be of interest to the beginner are included in the final chapter.

BOTANY OF VARIOUS REGIONS

COKER, WILLIAM CHAMBERS AND HENRY R. TOTTEN

Trees of the southeastern states, including Virginia, North Carolina, South Carolina, Tennessee, Georgia, and northern Florida. Third edition Chapel Hill N C. The University of North Carolina Press 1945 419 p. illus. 20 cm. $3 00 524

Note: A field book and reference manual that is addressed primarily to the amateur botanist. Over 200 trees and some shrubs are described, and most of the descriptions are accompanied by an illustration, which is, in most cases, carefully-rendered line drawing of twig with leaves and fruit. In this edition, the principal changes are concerned with more complete information on ranges of many trees.

DEGENER, OTTO

Plants of Hawaii National Park illustrative of plants and customs of the South Seas. First photo-lithoprint edition of "Ferns and flowering plants of Hawaii National Park, with descriptions of ancient Hawaiian customs and an introduction to the geologic history of the islands." New York The author 1945 314 p. illus. 23 cm. $2.50 525

Contents (abridged) Purpose and scope. Geologic history of the Hawaiian Islands. Origin of the Hawaiian flora. Plants and customs. Conclusion. List of illustrations.

Note: This work has two-fold purpose: to describe Hawaiian flora and to record the part played by specific plants in the folklore and economy of the native peoples. The author points out in prefatory note that his studies have application not only to Hawaii but throughout Polynesia. The book is addressed to tourists, students of anthropology and amateur naturalists rather than to professional botanists although all plants described are identified botanically and accurately illustrated.

FOSTER, MULFORD B AND RACINE SARASY FOSTER

Brazil. New York The Ronald Press Company 1945 314 p. illus. (part col d) 24 cm. $3.50. 526

Note The title of this book is somewhat misleading, since it is by no means routine guide to the country or general travel description, but an informal account of the explorations of two plant collectors in eastern and southern Brazil. As such, it is highly informative, and although generally flavored with descriptive observations of the people, the cities and the countryside, its primary appeal will be to students of tropical and semitropical botany The principal objective of the expeditions was the collection of "airplants"—bromeliads—and rare orchids, and full account is rendered of the difficulties, the thrills, and the very rich botanical rewards encountered. The text is liberally illustrated with drawings and some hundred and fifty excellent photographs.

HARRAR ELLWOOD SCOTT, AND JACOB GEORGE HARRAR

Guide to southern trees. New York Whittlesey House McGraw Hill Book Company Inc., 1946 712 p illus. 18 cm. (Whittlesey House field guide series) $5 00 527

Contents: Introduction. Keys to the generic groups The conifers. The broadleaved trees. Glossary Selected references. Index.

Note. A field manual designed to aid in the identification and study of trees indigenous to the southern states of the United States. More than 350 species are described. For each species are given common name or names, scientific name, and descriptions of habit, leaves, flowers, fruit, twigs, bark, habitat, distribution, importance. 201 full-page plates depict the foliage, fruit, flowers, etc., of different species, in illustrations prepared by Mrs. Helene S. Miller from living materials and authentic herbarium sheets. Keys and synopses of the different groups and families are given to aid in the identification of specimens.

HAUSMAN, ETHEL HINCKLEY

The illustrated encyclopedia of American wild flowers. Illustrated by Tabea Hofmann and the author Garden City N Y Garden City Publishing Co Inc., 1947 534 p illus. (part col d) 22 cm. $2 49 528

Contents: A word to the reader Names of plants. How to use this book. A letter [by Sigrid Undset] about our wild flowers. Conserving our wild flowers. Key to the color plates. Illustrated guide to the flower families. The illustrated encyclopedia of American wild flowers. Glossary Wild flower preservation. Wild flower protection lists. Floral emblems of the states of the United States and provinces of Canada.

Note: A reference volume whose chief use is in the identification of wild flowers. The illustrated guide to the flower families, covering 60 pages of the introduction, presents, family by family the identifying characteristics of American wild flower families, with outline pictures of typical representatives of the families adjoining, in order to assist amateur naturalists in the identification of species. The encyclopedia itself consists of an alphabetical arrangement of the families containing descriptions of each family and of the different groups, genera, and species within the family Abundant references from common names and generic names appear in the main body of the same alphabet, leading the reader to the family in which appears the description of the species. Outline drawings of the different species appear in the text, and 16 composite pictures in color show typical groups of wild flowers in their natural settings.

MERRILL ELMER DREW

A botanical bibliography of the islands of the Pacific. Washington, D C. Government Printing Office, 1947 404 p 25 cm. (Smithsonian Institution. United States National Museum. Contributions from the United States National Herbarium. Vol. 30 part 1) Paper $1 00 529

Contents A botanical bibliography of the islands of the Pacific, by Elmer D Merrill Introduction. Reference list of abbreviations. Bibliography A subject index to Elmer D. Merrill's A botanical bibliography of the islands of the Pacific, by Egbert H Walker Introduction. General index. Regional index. Systematic index. Index of principal references to geographic names.

Note About 3800 titles are recorded in this bibliography which is revision of two papers published in 1924 and 1937 with the

Plagiogyriaceae. Cyatheaceae. Aspidiaceae. Blechnaceae. Aspleniaceae. Matoniaceae. Polypodiaceae. Vittariaceae. Marsileaceae. Salviniaceae. Index. Plates.

Note This is a systematic work describing the 103 genera of the 11 recognized families of ferns. Under each genus there are one or more bibliographical citations and the name of the type species with names. The work is not illustrated except for the ten plates. The introduction contains a brief history of pteridology from the time of Linnaeus to the present.

FRYE, THEODORE CHRISTIAN AND LOIS CLARK

Hepaticae of North America. Part III. Seattle, Wash. University of Washington Press, 1945 337–563 p. illus 26 cm. (University of Washington publications in biology Vol. 6, no. 3) Paper $3.00 542

Contents Lophocoleideae. Plagiochilaideae. Harpanthoideae. Odontoschismoideae. Cephaloziaceae. Cephaloziellaceae. Brief index to Part I–III.

—— Hepaticae of North America. Part IV Seattle Wash. University of Washington Press, 1946 565–733 p. illus. 25 cm. (University of Washington publications in biology Vol. 6 no 4) Paper $2.50 543

Contents: Scapanioideae. Lepidozioideae. Calypogeioideae. Raduloideae. Pleuroziaceae. Porellaceae.

—— Hepaticae of North America. Part V Seattle, Wash. University of Washington Press, 1947 735–1022 p. illus. 25 cm. (University of Washington publications in biology Vol. 6 no 5) Paper $4.50 544

Contents: Frullanioideae. Lejeuneoideae. Anthocerotales. Additions. References. Abbreviations. Corrections. Explanation of scientific terms. Index.

Note. (1111a) A systematic classification of the liverworts and scale mosses of North America with descriptions, illustrations or references to illustrations, type locality, geographic range, and citations to original literature. The parts listed here complete the work.

FULFORD MARGARET

The genus Bazzania in Central and South America. Waltham, Mass. Chronica Botanica Co., 1946 175 p. illus. 27 cm. (Annales cryptogamici et phytopathologici, edited by Frans Verdoorn. Vol. III) Paper $5.00 545

Contents (abridged) Characteristics of the genus Bazzania. Description of the American species. Key to the subgenera. Subgenus Bidentatae. Subgenus Tridentatae. Section 1 Grandifoliae. Subgenus 2 Connatae. Section 3, Fissistipulae. Section 4 Appendiculatae. Section 5 Vittatae. Excluded species. List of species not available for this study. Distribution. Literature. Index.

Note An important taxonomic classification and description of a large genus of the class Hepaticae. The descriptions of species, their habitat, distribution, etc. follow the usual pattern of monographs of this type but the author's comments on the species, particularly in regard to distinguishing characteristics, are full and very clearly expressed.

HAUSMAN ETHEL HINCKLEY

Beginner's guide to the wild flowers. Illustrated by the author New York G P Putnam's Sons 1948 376 p. illus. 22 cm. $3.50 546

Contents How to use this beginner's guide. Flowers white or blush. Flowers yellow or orange. Flowers pink or red. Flowers blue or violet. Flowers green or brown. Index.

Note A pocket-sized reference book, arranged in a way that makes sense to the beginner. It facilitates identification in the field; the flowers are classified in five color groups, named above. The typical description of a specific plant covers the common name, scientific name, color, size, shape, odor whether the plant is sticky, hairy or smooth, whether the leaves are rough, soft, rigid or flexible, the type habitat, geographic range, and season of flowering. This matter is supplemented in every case by a clear line drawing.

HITCHCOCK, CHARLES LEO, AND BASSETT MAGUIRE

A revision of the North American species of Silene. Seattle University of Washington Press 1947 73 p illus. 25 cm. (University of Washington publications in biology Vol. 13) $1.50 547

Contents History. Relationship. Subspecific categories. Meaning of terms. Material examined. Taxonomic treatment. Key to species. Descriptions of species. Representative collections examined. Index to collections seen. Index to pertinent names.

Note A systematic work for botanists which classifies and describes 54 species of Silene found in North America. There are five plates containing drawings of representative Silene plant structures, and two plates of maps showing areal distribution. The descriptions are based on the authors' study of these plants in the laboratory in the field, and in various herbariums.

JONES GEORGE NEVILLE

American species of Amelanchier with 14 maps and 23 plates Urbana, Ill. The University of Illinois Press 1946 126 p. illus. 27 cm. (Illinois biological monographs. Vol. XX, no. 2) $2.00 548

Contents. Introduction. Taxonomy: Bibliography and description of the genus. Keys to species. Description and discussion of species. List of numbered collections. Plates. Index to plant names.

Note. A description for botanists of American species of Amelanchier a genus of shrubs and small trees. The work is based on a survey of the related literature and on the author's personal study of these plants in various herbariums. Each species is described botanically and its range is given. Type localities and literature references are cited. A set of plates reproduces photographs of branchlets and leaf types.

PRESTON, RICHARD JOSEPH, JR.

North American trees (exclusive of Mexico and tropical United States) a handbook designed for field use, with plates and distribution maps. Ames Iowa The Iowa State College Press, 1948 371 p. illus. 20 cm. $4.00 549

Contents Introduction. Natural relationship of trees. Forest regions of North America. Tree characters. Key to the genera. Handbook of North American trees. Glossary. Index.

Note. Designed to meet the needs of scientists, students, and general public, this up-to-date field manual is a guide to the trees of North America north of Mexico. Both trees native to the area and trees naturalized or commonly planted are included. The principal trees (212 species of importance or general interest) are described in the following respects: habit, leaves, fruit, twigs, bark, wood, physical character; the leaves, fruit, and other parts are illustrated in line drawings, with a 1-inch-square range map to show the distribution of the species. An additional 116 less important species are more briefly described or mentioned in the keys. The arrangement is by family with numerous keys to assist in identification. The nomenclature follows the 1944 revision of the U.S. Forest Service check list.

SMITH ALEXANDER HANCHETT

North American species of Mycena. Ann Arbor University of Michigan Press, 1947 521 p illus. 24 cm. (University of Michigan studies. Scientific series. Vol. XVII) $6.00 550

SWINGLE, DEANE BRET

A textbook of systematic botany Third edition. New York McGraw Hill Book Company, Inc., 1946 343 p illus (part col d) 22 cm. (McGraw Hill publications in the botanical sciences, Edmund W Sinnott, consulting editor) $3.50 523

Contents: Evolution in relation to taxonomy Methods used in the identification of flowering plants. The preparation of herbaria. The terminology of systematic botany General features of Spermatophyta. Families of gymnosperms. Families of dicotyledons. Families of monocotyledons. Nomenclature. Principles of taxonomy Systems of taxonomy The literature of systematic botany Index.

Note: (1417a) A college text covering the principles of taxonomy and nomenclature as applied to botany. The book is designed for one-semester course with course in general botany as prerequisite. The new edition has been changed so that actual study of plant groups precedes study of abstract principles. The material is so organized, however that following study of the first two chapters the others may be taken up in almost any order. General revision of most chapters has been done in consultation with other taxonomists and a new chapter added on methods of identification. A selected and annotated list of articles, monographs, books, etc. which will be of interest to the beginner are included in the final chapter.

BOTANY OF VARIOUS REGIONS

COKER, WILLIAM CHAMBERS, AND HENRY R. TOTTEN

Trees of the southeastern states, including Virginia, North Carolina, South Carolina, Tennessee, Georgia, and northern Florida. Third edition. Chapel Hill, N C. The University of North Carolina Press 1945 419 p. illus. 20 cm. $3.00 524

Note. A field book and reference manual that is addressed primarily to the amateur botanist. Over 200 trees and some shrubs are described and most of the descriptions are accompanied by an illustration, which is, in most cases, carefully-rendered line drawing of twig with leaves and fruit. In this edition, the principal changes are concerned with more complete information on ranges of many trees.

DEGENER, OTTO

Plants of Hawaii National Park illustrative of plants and customs of the South Seas. First photo-lithoprint edition of "Ferns and flowering plants of Hawaii National Park, with descriptions of ancient Hawaiian customs and an introduction to the geologic history of the islands." New York The author 1945 314 p. illus. 23 cm. $2.50 525

Contents (abridged) Purpose and scope. Geologic history of the Hawaiian Islands. Origin of the Hawaiian flora. Plants and customs. Conclusion. List of illustrations.

Note: This work has two-fold purpose: to describe Hawaiian flora and to record the part played by specific plants in the folklore and economy of the native peoples. The author points out in a prefatory note that his studies have application not only to Hawaii but throughout Polynesia. The book is addressed to tourists, students of anthropology and amateur naturalists rather than to professional botanists although all plants described are identified scientifically and accurately illustrated.

FOSTER, MULFORD B., AND RACINE SARASY FOSTER

Brazil. New York The Ronald Press Company 1945 314 p. illus. (part col'd) 24 cm. $3.50. 526

Note The title of this book is somewhat misleading, since it is by no means routine guide to the country or general travel description, but an informal account of the explorations of two plant collectors in eastern and southern Brazil. As such, it is highly informative, and although generally flavored with descriptive observations of the people, the cities and the countryside, its primary appeal will be to students of tropical and semitropical botany The principal objective of the expeditions was the collection of "air plants"—bromeliads—and rare orchids, and full account is rendered of the difficulties, the thrills, and the very rich botanical rewards encountered. The text is liberally illustrated with drawings and some hundred and fifty excellent photographs.

HARRAR ELLWOOD SCOTT, AND JACOB GEORGE HARRAR

Guide to southern trees. New York Whittlesey House, McGraw Hill Book Company, Inc., 1946 712 p illus. 18 cm. (Whittlesey House field guide series) $5.00 527

Contents: Introduction. Keys to the generic groups. The conifers. The broadleaved trees. Glossary Selected references. Index.

Note: A field manual designed to aid in the identification and study of trees indigenous to the southern states of the United States. More than 350 species are described. For each species are given common name or names, scientific name, and descriptions of habit, leaves, flowers, fruit, twigs, bark, habitat, distribution, importance. 200 full-page plates depict the foliage, fruit, flowers, etc., of different species, in illustrations prepared by Mrs. Helene S. Miller from living materials and authentic herbarium sheets. Keys and synopses of the different groups and families are given to aid in the identification of specimens.

HAUSMAN ETHEL HINCKLEY

The illustrated encyclopedia of American wild flowers. Illustrated by Tabea Hofmann and the author Garden City N Y Garden City Publishing Co., Inc., 1947 534 p. illus. (part col'd) 22 cm. $2 49 528

Contents A word to the reader Names of plants. How to use this book. A letter [by David Fairchild] about our wild flowers. Conserving our wild flowers. Key to the color plates. Illustrated guide to the flower families. The illustrated encyclopedia of American wild flowers. Glossary Wild flower preservation. Wild flower protection lists. Floral emblems of the states of the United States and provinces of Canada.

Note: A reference volume whose chief use is in the identification of wild flowers. The illustrated guide to the flower families, covering 60 pages of the introduction, presents, family by family the identifying characteristics of American wild flower families, with outline pictures of typical representatives of the families adjoining, in order to assist amateur naturalists in the identification of species. The encyclopedia itself consists of an alphabetical arrangement of the families containing descriptions of each family and of the different groups, genera, and species within the family Abundant references from common names and generic names appear in the main body of the same alphabet, leading the reader to the family in which appears the description of the species. Outline drawings of the different species appear in the text, and 16 composite pictures in color show typical groups of wild flowers in their natural settings.

MERRILL, ELMER DREW

A botanical bibliography of the islands of the Pacific. Washington, D C. Government Printing Office 1947 404 p 25 cm. (Smithsonian Institution. United States National Museum. Contributions from the United States National Herbarium. Vol. 30 part 1) Paper $1.00 529

Contents: A botanical bibliography of the islands of the Pacific, by Elmer D. Merrill Introduction. Reference list of abbreviations. Bibliography. A subject index to Elmer D Merrill's A botanical bibliography of the islands of the Pacific, by Egbert H. Walker: Introduction. General index. Regional index. Systematic index. Index of principal references to geographic names.

Note About 3900 titles are recorded in this bibliography which is revision of two papers published in 1924 and 1937 with the

addition of numerous titles. Included are works upon the lower cryptogams, ferns, and seed plants, and on economic, taxonomic, ecological, and other botanical studies on the flora of the Pacific Islands from Juan Fernández on the east to New Caledonia and New Hebrides on the west and from Midway Island on the north to the Kermadec Islands on the south. The bibliography is arranged by author and under each author his publications are listed by date, the titles being supplemented by brief descriptive notes concerning the contents of the articles. Botanists of all nationalities from Linnaeus to the present time are included. The index, by Egbert H. Walker designed to facilitate reference to the bibliography is published as a separate paper though under the same cover as the main work.

MERRILL, ELMER DREW

Plant life of the Pacific world. New York The Macmillan Company, 1945 295 p illus. 21 cm. (The Pacific world series) $3.50 530

Contents: The rain forests and jungles of the tropics. General principles of botanical classification. Plants of the seashore. The mangrove forest. The secondary forests and open grass-lands. The primary forest. Noteworthy plants of special interest. Weeds and their significance. The cultivated plants. Jungle foods. Problems of Malaysian plant distribution. Problems of Polynesian plant distribution. The significance of certain local plant names. Notes on specific islands and island groups. Notes on botanical history exploration, and bibliography. Simple directions for preparing botanical specimens. Botanical arrangement of the species. Glossary. Index.

Note. A survey of plant life in the whole Pacific area, together with descriptions of some of the commonest plants and those having the widest geographical distribution. The material is arranged under types of vegetation, and the objective throughout has been to interpret in simple terms the interrelation of plant and animal life in the tropical forests, in the open grass-lands, and along the seashore. The book, as others in the series, was written especially for the information of members of the United States armed forces stationed in the Pacific area during World War II; but it is useful to any reader who desires information about these regions. There is a nine-page bibliography listing botanical works on the whole area but featuring publications on individual islands and regions.

PRESTON RICHARD JOSEPH, JR.

Rocky Mountain trees a handbook of the native species with plates and distribution maps Second edition. Ames Iowa The Iowa State College Press 1947 285 p. illus. 19 cm. $2.50 531

Contents: Introduction. Check list of the trees found within each state by scientific and common names Arizona. Colorado. Idaho. Montana. Nevada. New Mexico. Western Texas. Utah. Wyoming. Key to the genera. Manual of Rocky Mountain trees. 1 to 284. Glossary. Selected bibliography. Index.

Note. (1440) A semi-popular reference and field book that is useful to amateur naturalists, students, and foresters. It supplies the necessary information for the identification of all the trees native to the area covered. Most of the descriptions are accompanied by a line drawing of twig, leaves, and fruit. Most of the changes in this edition have to do with revised nomenclature.

RAUP HUGH MILLER

The botany of southwestern Mackenzie. With thirty-seven plates and sixteen text figures. Jamaica Plain Mass. The Arnold Arboretum of Harvard University 1947 275 p illus 25 cm. (Sargentia, a continuation of the Contributions from the Arnold Arboretum of Harvard University VI) $5.00. 532

Contents: Introduction and acknowledgments. Topography of southwestern Mackenzie. History of exploration. Geology and soils. Climate and agriculture. Plant communities of southwestern Mackenzie. Geographic affinities of the vegetation of southwestern Mackenzie. Origins of the flora of southwestern Mackenzie. Catalogue of the vascular flora of southwestern Mackenzie. Literature cited. Plates. Index.

Note. Conceived as a contribution toward the descriptive botany of boreal America, this volume deals with the southwestern part of the District of Mackenzie, Northwest Territories. The publication, which was founded upon fieldwork in the District, divides roughly into four parts: the general description of the region, an account of the plant communities there, a study of the geographic affinities of some species, and an annotated catalogue of the vascular plants known to occur in southwestern Mackenzie. The last does not presume to be complete as areas of the region are still unexplored botanically. The aim of the author was chiefly to bring printed knowledge of the flora up to date in order to furnish a sounder basis for further work. Twenty-five of the plates at the end of the book contain 271 species of plants in Canada and Alaska.

STEVENS, WILLIAM CHASE

Kansas wild flowers. Lawrence, Kan. University of *Kansas Press, 1948 463 p illus.* (part col d) 26 cm. $7.50 533

Contents (abridged): Introduction. The Kansas prairie. Physiographic regions. Key to families. Families of wild flowers: Water plantain. Cattail. Lily. Pickerelweed. Spiderwort. Arum. Amaryllis. Iris. Yam. Orchid. Custard-apple. Buttercup. Barberry. Moonseed. Laurel. Lotus. Waterlily. Mallow. Mulberry. Nettle. Geranium. Oxalis. Soapweed. Flax. Caltrop. Rue. Milkwort. Spurge. St. John's-wort. Violet. Passionflower. Poppy. Fumitory. Caper. Mustard. Pink. Purslane. Pokeberry. Buckwheat. Four-o'clock. Primrose. Plantain. Ebony. Polemonium. Morning-glory. Waterleaf. Borage. Nightshade. Gentian. Dogbane. Milkweed. Figwort. Trumpet-creeper. Unicorn-plant. Broomrape. Acanthus. Verbena. Mint. Rose. Apple. Plum. Mimosa. Cassia. Pea. Saxifrage. Gooseberry. Stonecrop. Loosestrife. Evening-primrose. Birthwort. Cactus. Loasa. Gourd. Buckthorn. Grape. Staff tree. Bladdernut. Sandalwood. Soapberry. Buckeye. Sumac. Carrot. Dogwood. Madder. Honeysuckle. Bellflower. Composite superfamily. Sunflower. Ragweed. Sneezewort. Elecampane. Aster. Ironweed. Thoroughwort. Camomile. Groundsel. Thistle. Chicory. Glossary. Index.

Note. A comprehensive, detailed description in words and photographs of the wild flowers of Kansas. It describes more than 500 species. The 761 photographs, made by the author and his wife over a period of years, are of four different kinds: views of plant colonies in their landscape setting, individual plants or small groups in the native habitat, plants dug up to display the roots and details of individual flowers. A description is given of each family and is followed by a key to the genera of the family. Descriptions of the individual species contain the following: scientific name, common name; etymology of the scientific name; color of the flowers, season, typical habitat; physical description of the plant root, stem, flowers, fruits, leaves; special notes about the species, such as history, lore, and economic uses among Indians, pioneers, and present-day settlers.

VERDOORN FRANS editor

Plants and plant science in Latin America. With 38 plates and 45 illustrations in the text. *Waltham, Mass. Published by the Chronica* Botanica Company 1945 381 p illus. 27 cm. (A new series of plant science books. Vol. XVI) $6.00 534

Note. This encyclopedic volume consists of signed articles by plant scientists on all phases of botany and agriculture in America south of the United States. Emphasis is placed upon the economic as well as upon the scientific aspects of the subject. The aim of the collection is to give the agronomist, botanist, forester and phytopathologist information on the wild and cultivated plants of Latin America, with the added aim of serving those scientists planning a trip to Latin America for collecting or for conducting research. Part 1 consists primarily of articles not previously published; Part 2 of articles (mostly somewhat revised) already published in the columns of *Chronica botanica*. Bibliographies appear in many of the chapters.

WHERRY EDGAR THEODORE

Wild flower guide, northeastern and midland United States. Illustrated by Tabea Hofmann. Sponsored by The Wild Flower Preservation Society Washington D C. Garden City N Y Doubleday & Company Inc., 1948 202 p illus. (part col d) 20 cm. $3.00. 535

Contents. Introduction. Wild flower conservation. Glossary. Flower parts. Classification. Monocots. Illustrations of monocots. Free-petal dicots. Illustrations of free-petal dicots. United-petal dicots. Illustrations of united-petal dicots. Appendices. Flowers according to color. Introduced wild flowers. An outline of plant ecology. Wild flower literature. Index.

Note. A compact and simplified guide to the identification of some four hundred species of wild flowers growing in the United States east of longitude 100° and north of latitude 37°. The plants are grouped according to family and each species is described as to common name, technical name, features, range, habitat, and culture. Drawings of each plant, many of them in color, are included. The appendix listing of flowers by color will be of value to the layman, for whom the book is designed.

VARIOUS PLANT GROUPS

BABCOCK, ERNEST BROWN

The genus Crepis. Part One The taxonomy, phylogeny distribution, and evolution of Crepis Part Two Systematic treatment. Berkeley and Los Angeles University of California Press, 1947 1030 p illus 26 cm. (University of California publications in botany Vol. 21–22) Part One cloth, $4.00 paper $3.50 Part Two cloth $12.00 paper $10.00. 536

Contents: Part One, The taxonomy phylogeny distribution, and evolution of Crepis: History of the investigations. Taxonomic concepts. Criteria of classification and phylogeny. The phylogeny of *Crepis*. The geographic distribution of *Crepis*. Asiatic European plant migration and its bearing on the present distribution of *Crepis*. Endemism in the Old World species of *Crepis*. The origin, migrations, and evolution of *Crepis*. Appendices. Some *Crepis* problems calling for further research. The bearing of the evolution of *Crepis* on the origin of the ancestors of Eurasiatic crop plants. The bearing of the distributional history of *Crepis* on the region of origin of some angiosperms. Ovary anatomy as a phylogenetic criterion in *Crepis*. References. Index. Part Two, Systematic treatment. History, diagnosis, and description of the genus. Diagnoses of the sections. Key to the sections. Desiphylum. Soyeria. Omalocline. Brachypodes. Mesomeris. Soyeria. Paleya. Anisorhamphus. Gephyroides. Barkhausia. Macropodes. Ixeridopsis. Intybellia. Mesophyllum. Pallidifolia. Lagoseris. Napinaria. Psilocarphus. Phaecasium. Hostia. Microcephalum. Pterotheca. Zacintha. Phytodesia. Lepidoseris. Nemauchenes. Psammoseris. Interspecific hybrids. Species not sufficiently known. Excluded names. Plates. Index to exsiccatae cited. Index to generic and specific names.

Note: This work represents a thorough revision of the genus *Crepis*, annual and biennial herbs of the chicory family. The chief interest in the genus lies in the low number of chromosomes in certain of its species, leading to its position as a sort of botanical counterpart of *Drosophila melanogaster*. Its importance in genetic studies has been recognized by the California Agricultural Experiment Station since 1918 and led to the publication of the present work, in preparation over a period of about 20 years. The systematic treatment is based primarily upon comparative morphology and divides the genus into 196 species grouped in 27 sections. For each species there is a detailed description of the various parts of the plant; its distribution and its relationship are covered; careful and detailed drawings are presented of each species. The bibliography citing articles in various languages, covers ten pages.

BENSON, LYMAN

A treatise on the North American Ranunculi. Notre Dame, Indiana University of Notre Dame, 1948 264 p 23 cm. (The American midland naturalist. Vol. 40 no 1) $1.25 537

Contents. Methods of investigation. Diagnostic characters. Geographical distribution. Policy in classification. Concept of genera—Concepts of species and varieties. References. Ranunculus L. List of species and varieties by subgenera and sections. Index.

Note. The accumulation of specimens collected since the last revision of the North American Ranunculi has created a need for more complete coverage, which is offered in this publication. The reclassification is based on extensive field studies, and while following a conservative policy in the segregation of groups, consideration is given also to the corresponding moderate or liberal viewpoint in nomenclature. The author has used a new system of natural vegetation classification. In the description of each variety there is included a list of references and of the herbaria where significant specimens may be found. In addition, a separate list of references is given at the end of the introductory sections. The treatise constitutes a highly specialized contribution to botanical taxonomy.

BLOMQUIST, HUGO LEANDER

The grasses of North Carolina. Durham, N C. Duke University Press, 1948 276 p illus. 26 cm. $7.50 538

Contents. Introduction. Introduced grasses. Native grasses. Economic considerations. The grass plant. Key to the subfamilies and tribes. Description of tribes and keys to the genera. Descriptions of North Carolina grasses—genera and species. Distribution maps. Glossary. Appendix. The identification of grasses by their vegetative characters. Key to the seedling or nonflowering phase of some of the common grasses of economic importance. Index.

Note: Three hundred and sixty species and varieties of grasses representing thirteen of the fourteen or fifteen known grass tribes of this world are described in this taxonomic manual for botany students. Habitat and distribution are given for each species in addition to the morphology. There are 349 illustrations—photographs and drawings, and 298 maps.

BRITTON, MAX EDWIN

A catalog of Illinois Algae. Evanston Ill. Northwestern University 1945 177 p 24 cm. (Northwestern University studies in the biological sciences and medicine. No 2) $3.00. 539

Contents. Review of the literature. Plan and arrangement of the catalog. Classified catalog of Illinois Algae. Phylum—Cyanophyta. Class—Myxophyceae. Phylum—Rhodophyta. Class—Rhodophyceae. Phylum—Chrysophyta. Class—Xanthophyceae. Class—Chrysophyceae. Class—Bacillariophyceae. Phylum—Chlorophyta. Class—Chlorophyceae. Phylum—Pyrrophyta. Class—Dinophyceae. Phylum—Euglenophyta. Class—Euglenophyceae. Excluded species. Bibliography. Index.

Note. The first work published of a series that will eventually provide a systematic organization of all the Algae found in the state of Illinois. It is based largely on previously published literature, and in a preliminary chapter the author has classified and cited this literature. In the catalog that follows, the information that is given relates chiefly to classification, synonymy in the literature and distribution within the state. Literature references are given throughout the catalog.

CHRYSLER, MINTIN ASBURY AND J. L. EDWARDS

The ferns of New Jersey including the fern allies. New Brunswick, N J Rutgers University Press 1947 201 p illus. 24 cm. $4.00. 540

Note. Eighty-one pteridophytes native to New Jersey are described and illustrated in this semi-popular handbook. Information is included on general structure and life history of a fern plant, factors determining distribution, classification, nomenclature, and hybrids. There is a key to the orders of ferns, a glossary and a short list of references. Photographs and distribution maps accompany the descriptions of individual species and varieties. Each description includes plant data, habitat, and range.

COPELAND, EDWIN BINGHAM

Genera filicum the genera of ferns. Waltham, Mass. Published by the Chronica Botanica Company 1947 247 p. illus. 27 cm. (Annales cryptogamici et phytopathologici. Vol. v) $6.00 541

Contents: Introduction. Order Ophioglossales: Ophioglossaceae. Order Marattiales: Marattiaceae. Order Filicales. Osmundaceae. Schizaeaceae. Gleicheniaceae. Loxsomaceae. Hymenophyllaceae. Plagiogyriaceae. Parkeriaceae. Hymenophyllopsidaceae. Davalliaceae.

Plagiogyriaceae. Cyatheaceae. Aspidiaceae. Blechnaceae. Aspleniaceae. Matoniaceae. Polypodiaceae. Vittariaceae. Marsileaceae. Salviniaceae. Index. Plates.

Note: This is systematic work describing the 305 genera of the 21 recognized families of ferns. Under each genus there are one or more bibliographical citations and the name of type species with range. The work is not illustrated except for the ten plates. The introduction contains brief history of pteridology from the time of Linnaeus to the present.

FRYE, THEODORE CHRISTIAN, AND LOIS CLARK

Hepaticae of North America. Part III. Seattle, Wash. University of Washington Press, 1945 337–563 p illus. 26 cm. (University of Washington publications in biology Vol. 6 no 3) Paper $3 00 542

Contents: Lophocoleoideae. Plagiochiloideae. Harpanthoideae. Odontoschismoideae. Cephalozioideae. Cephaloziellioideae. Brief index to Part I–III.

—— Hepaticae of North America. Part IV Seattle Wash. University of Washington Press, 1946 565–733 p. illus 25 cm. (University of Washington publications in biology Vol. 6 no 4) Paper $2.50 543

Contents: Scapanioideae. Lepidozioideae. Calypogeioideae. Radulioideae. Pleurozioideae. Porelloideae.

—— Hepaticae of North America. Part V Seattle Wash. University of Washington Press 1947 735–1022 p illus. 25 cm. (University of Washington publications in biology Vol. 6 no. 5) Paper $4.50 544

Contents: Frullanioideae. Lejeuneoideae. Anthocerotales. Additions. References. Abbreviations. Corrections. Explanation of scientific terms Index.

Note (1111a) A systematic classification of the liverworts and scale mosses of North America with descriptions, illustrations or references to illustrations, type locality geographic range, and citations to original literature. The parts listed here complete the work.

FULFORD MARGARET

The genus Bazzania in Central and South America. Waltham, Mass Chronica Botanica Co., 1946 175 p. illus. 27 cm. (Annales cryptogamici et phytopathologici, edited by Frans Verdoorn. Vol. III) Paper $5.00 545

Content (abridged) Characteristics of the genus Bazzania. Description of the American species. Key to the subgenera. Subgenus Bidentatae. Subgenus Tridentatae Section 1, Grandistipulae. Section 2 Connatae Section 3, Fissistipulae. Section 4 Appendiculatae. Section 5, Vittatae. Excluded species. List of species not available for this study Distribution. Literature. Index.

Note An important taxonomic classification and description of large genus of the class Hepaticae The descriptions of species, their habitat, distribution, etc. follow the usual pattern of monographs of this type but the author's comments on the species, particularly in regard to distinguishing characteristics, are full and very clearly expressed.

HAUSMAN ETHEL HINCKLEY

Beginner's guide to the wild flowers Illustrated by the author New York G P Putnam s Sons, 1948 376 p illus. 22 cm. $3.50 546

Contents How to use this beginner's guide Flowers white or bluish. Flowers yellow or orange. Flowers pink or red. Flowers blue or violet. Flowers green or brown. Index.

Note A pocket-sized reference book, arranged in way that makes sense to the beginner. T facilitate identification in the field, the flowers are classified in five color groups, named above. The typical description of specific plant covers the common name, scientific name, color size, shape odor whether the plant is sticky hairy or smooth, whether the leaves are rough, soft, rigid or flexible, the type habitat, geographic range, and season of flowering. This matter is supplemented in every case by clear line drawing.

HITCHCOCK, CHARLES LEO, AND BASSETT MAGUIRE

A revision of the North American species of Silene. Seattle University of Washington Press, 1947 73 p illus. 25 cm. (University of Washington publications in biology Vol. 13) $1.50 547

Contents: History Relationship. Subspecific categories. Meaning of terms. Material examined. Taxonomic treatment. Key to species. Descriptions of species. Representative collections examined. Index to collections seen. Index to pertinent names.

Note A systematic work for botanists which classifies and describes 54 species of Silene found in North America. There are five plates containing drawings of representative Silene plant structures, and two plates of maps showing areal distribution. The descriptions are based on the authors' study of these plants in the laboratory in the field, and in various herbariums.

JONES GEORGE NEVILLE

American species of Amelanchier with 14 maps and 23 plates. Urbana, Ill. The University of Illinois Press, 1946 126 p. illus. 27 cm. (Illinois biological monographs. Vol. XX, no 2) $2 00 548

Contents Introduction. Taxonomy. Bibliography and description of the genus. Keys to species. Description and discussion of species. List of unnamed collections. Plates. Index to plant names.

Note A description for botanists of American species of Amelanchier genus of shrubs and small trees. The work is based on survey of the related literature and on the author's personal study of these plants in various herbariums. Each species is described botanically and its range is given. Type localities and literature references are cited A set of plates reproduces photographs of branchlets and leaf types.

PRESTON, RICHARD JOSEPH, JR.

North American trees (exclusive of Mexico and tropical United States) a handbook designed for field use, with plates and distribution maps Ames, Iowa The Iowa State College Press 1948 371 p illus 20 cm. $4 00 549

Contents: Introduction Natural relationship of trees. Forest regions of North America. Tree characters. Key to the genera. Handbook of North American trees. Glossary Index.

Note Designed to meet the needs of scientists, students, and general public, this up-to-date field manual is guide to the trees of North America north of Mexico. Both trees native to the area and trees naturalized or commonly planted are included. The principal trees (231 species of importance or general interest) are described in the following respects habit, leaves, fruit, twigs, bark, wood, silvical characters; the leaves, fruit, and other parts are illustrated in line drawings, with 2-inch-square range map to show the distribution of the species. An additional 334 less important species are more briefly described or mentioned in the keys. The arrangement is by family with numerous keys to assist in identification. The nomenclature follows the 1944 revision of the U.S. Forest Service check list.

SMITH ALEXANDER HANCHETT

North American species of Mycena. Ann Arbor University of Michigan Press, 1947 521 p illus. 24 cm (University of Michigan studies. Scientific series. Vol. XVII) $6.00 550

Contents (abridged) Introduction. Diagnostic characters of the species. Technique and material examined. Subdivisions of Mycena. Key to the subgenera of Mycena. Subgenus Pseudomycena. Subgenus Eumycena. Subgenus Glutinipes. Subgenus Mycenella. Merrill tropical and subtropical species. Excluded and doubtful species. Bibliography. Plates. Index.

Note. This work represents a comprehensive, systematic revision of a large genus of gill fungi. It is based chiefly on extensive field and laboratory work by the author and most of the descriptions are based on specimens collected by him. The descriptions of the species are exceptionally full and cover the usual literature citations, morphology, habits, habitat and distribution, sources of the material studied, and the author's observations. The verbal descriptions are supplemented by 14 full page plates of line drawings and approximately 130 reproductions of photographs taken in the field. The bulk of the book is intended for specialists in mycology but advanced amateurs will find the photographs and the general chapters on diagnostic characters and on techniques of some value.

THOM, CHARLES AND KENNETH B RAPER

A manual of the Aspergilli. Baltimore The Williams & Wilkins Company 1945 373 p. illus. (part col'd) 23 cm. $7.00 551

Contents (abridged) Part I, General discussion. Historical introduction. Classification, generic diagnosis, and synonymy. Morphology and description. Cultivation and examination. Preservation of cultures. Part II, The manual proper: The Aspergillus clavatus group. The Aspergillus glaucus group. The Aspergillus fumigatus group. The Aspergillus nidulans group. The Aspergillus ustus group. The Aspergillus flavipes group. The Aspergillus versicolor group. The Aspergillus terreus group. The Aspergillus candidus group. The Aspergillus niger group. The Aspergillus wentii group. The Aspergillus tamarii group. The Aspergillus flavus-oryzae group. The Aspergillus ochraceus group. Part III, Reference materials: Topical bibliography. General bibliography. Check list of species and genera. Accepted species, varieties, and mutations. Index.

Note. This manual has been prepared specifically to assist research workers identify the Aspergilli, a large group of molds active in various decaying processes, and important economically in the production of industrial fermentations and antibiotic substances. It does not discuss the biochemical activities of these molds, but provides a detailed description of their characteristics, occurrence, and economic importance. Almost as important to workers in this field as the text itself, is the extensive bibliography arranged first by subject and then by author.

WHERRY, EDGAR THEODORE

Guide to eastern ferns. Second edition. Philadelphia University of Pennsylvania Press 1948 252 p 18 cm. $2 00 552

Contents: Preface to second edition. Glossary of technical terms. Classification. Keys to families, genera, and species. Illustrations and descriptions. Fern cultivation. Index to genera and species.

Note. (1937) A non-technical aid to the identification of ferns found in the region from Pennsylvania and New Jersey to Virginia. Data covering each species include history features, habitat, range, and remarks. This second edition has been revised and enlarged by the addition of keys to families, genera, and species, and several illustrations have been redrawn.

WOLF, FREDERICK ADOLF AND FREDERICK T WOLF

The fungi. New York John Wiley & Sons Inc., 1947 2 v illus. 21 cm. Vol. I, $6 00 Vol. II, $6.50 553

Contents: Volume I. The founding of mycology. Isolation and cultivation of fungi. Classification and taxonomy of fungi. The myxomycetes. The phycomycetes. The ascomycetes. The basidiomycetes. The deuteromycetes (fungi imperfecti). Author index. Subject index. Volume II. Nutrition of fungi. Enzymes and enzymatic activities of fungi. Respiration. Biochemistry of fungi. Effects of temperature on fungi. Effects of radiation on fungi. Effects of reactions of substrate on fungi. Spore dissemination. Germination of spores. Host penetration. Physiologic specialization and variation among fungi. Associative effects among fungi. Mycorrhizas and mycotrophy. Genetics of fungi. Poisonous and edible fungi. Medical mycology. Geographical distribution of fungi. Mycology in relation to plant pathology. Soil fungi. Fungus-insect interrelationships. Marine fungi. Fossil fungi. Author index. Subject index.

Note. Although there has long been recognition of the economic and biological importance of fungi, research into their behavior and potential uses has multiplied many times since the discovery of penicillin. This important book, designed both as a text for use in advanced courses and a reference work, deals neither with industrial nor pathological mycology yet the viewpoint from which it is written, should make it useful to all research workers who are concerned with fungi. The authors have selected throughout both volumes to emphasize behavior rather than taxonomy. While the first volume is arranged by class and order and includes a consideration of morphology and classification basic to the study of fungi, the discussion deals mainly with habits and reproductive processes. Volume two is concerned chiefly with the physiology of fungi and the influence of environment upon their processes and activities. Related literature is cited in extensive chapter bibliographies and there are many exquisitely drawn figures.

PLANT CHEMISTRY AND PHYSIOLOGY

CROCKER WILLIAM

Growth of plants twenty years' research at Boyce Thompson Institute. New York Reinhold Publishing Corporation 1948 459 p. illus. (part col d) 24 cm. $10.00 554

Contents: Introduction. Early problems. Life span of seeds. Dormancy in seeds. Physiological effects of ethylene and other unsaturated carbon-containing gases. Effect of certain lethal gases upon plants and animals. Plant hormones, by P W Zimmerman. Dormancy in buds. Plant cell membranes, by W K Farr. Plants grown under controlled environmental conditions. Research on insecticides, by A. Hartzell. Fungicide investigations, by S. E. A. McCallan. Miscellaneous. Author index. Subject index.

Note The Boyce Thompson Institute for Plant Research was founded in 1924 for the purpose of conducting basic research on various aspects of plant growth. This volume, prepared by the Director of the Institute, gives a summarized, critical account of the research work carried on at the Institute since its inception. The book is well illustrated with photographs which depict the results of experimentation on plant development, and each chapter concludes with a two- to four-page bibliography

MURNEEK, ANDREW EDWARD AND R. O WHYTE

Vernalization and photoperiodism, a symposium foreword by Kenneth V Thimann Waltham Mass. Chronica Botanica Co. 1948 196 p. illus. 27 cm. (Lotsya—a biological miscellany Frans Verdoorn, editor Vol. 1) Paper $4.50 555

Contents (abridged) Foreword, by K. V Thimann. History of research in vernalization, by R. O. Whyte. History of research in photoperiodism, by A. E. Murneek. Hormones in relation to vernalization and photoperiodism, by K. C. Hamner. Wave length dependence and the nature of photoperiodism, by H. A. Borthwick, M. W Parker and S. B. Hendricks. The photoperiodicity of flowering under short day with supplemental light of different wave lengths, by G. L. Funke. Nutrition and metabolism as related to photoperiodism, by A. E. Murneek. Anatomical and histological changes in relation to vernalization and photoperiodism, by R. H. Roberts and B. E. Struckmeyer. Length of day in the climates of past geological eras and its possible effects upon changes in plant life, by H. A. Allard. Vernalization and photoperiodism in the tropics, by S. M. Sircar. Some preliminary observations of phenological data as a tool in the study of photoperiodic and thermal requirements of various plant material, by M. Y. Nuttonson. Thermoperiodicity by F W Went. Author index. Subject index.

Note. A comprehensive review of the present state of knowledge and research regarding the physiology of plant flowering as it is affected by the chilling of germinating seeds and by varying lengths of periods of light. Each chapter prepared by an authority of international repute in the field of agricultural research, reviews not only the author's experience in a particular aspect of the problem, but also provides a resumé of pertinent literature of the subject. Extensive lists of references are cited at the end of each paper.

Plagiogyriaceae. Cyatheaceae. Aspidiaceae. Blechnaceae. Aspleniaceae. Marattiaceae. Polypodiaceae. Vittariaceae. Marsileaceae. Salviniaceae. Index. Plates.

Note. This is systematic work describing the 305 genera of the 21 recognized families of ferns. Under each genus there are one or more bibliographical citations and the name of type species with range. The work is not illustrated except for the ten plates. The introduction contains brief history of pteridology from the time of Linnaeus to the present.

FRYE, THEODORE CHRISTIAN, AND LOIS CLARK

Hepaticae of North America. Part III. Seattle, Wash. University of Washington Press, 1945 337–563 p. illus. 26 cm. (University of Washington publications in biology Vol. 6 no 3) Paper $3 00 542

Contents: Lophocoleoideae. Plagiochiloideae. Harpanthoideae. Odontoschismoideae. Cephalozioideae. Cephaloziellioideae. Brief index to Part I–III.

—— Hepaticae of North America. Part IV Seattle Wash. University of Washington Press, 1946. 565–733 p illus. 25 cm. (University of Washington publications in biology Vol. 6 no 4) Paper $2.50 543

Contents. Scapanioideae. Lepidozioideae. Calypogeioideae. Radulioideae. Pleurozioideae. Porelloideae.

—— Hepaticae of North America. Part V Seattle Wash. University of Washington Press 1947 735–1022 p illus. 25 cm. (University of Washington publications in biology Vol. 6 no. 5) Paper $4.50 544

Contents. Frullanioideae. Lejeuneoideae. Anthocerotales. Additions. References. Abbreviations. Corrections. Explanation of scientific terms. Index.

Note (1511a) A systematic classification of the liverworts and scale mosses of North America with descriptions, illustrations or references to illustrations, type locality geographic range, and citations to original literature. The parts listed here complete the work.

FULFORD MARGARET

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Note. An important taxonomic classification and description of large genus of the class Hepaticae. The descriptions of species, their habitat, distribution, etc. follow the usual pattern of monographs of this type but the author' comments on the species, particularly in regard to distinguishing characteristics, are full and very clearly expressed.

HAUSMAN ETHEL HINCKLEY

Beginner's guide to the wild flowers Illustrated by the author New York G P Putnam s Sons, 1948 376 p illus. 22 cm. $3.50 546

Contents How to use the beginner's guide. Flowers white or whitish. Flowers yellow or orange Flowers pink or red. Flowers blue or violet. Flowers green or brown. Index.

Note A pocket-sized reference book, arranged in way that makes sense to the beginner T facilitate identification in the field, the flowers are classified in five color groups, named above. The typical description of specific plant covers the common name, scientific name, color size, shape, odor whether the plant is sticky hairy or smooth, hether the leaves are tough, soft, rigid or flexible, the type habitat, geographic range, and season of flowering This matter is supplemented in every case by clear line drawing.

HITCHCOCK, CHARLES LEO AND BASSETT MAGUIRE

A revision of the North American species of Silene Seattle University of Washington Press 1947 73 p illus 25 cm. (University of Washington publications in biology Vol. 13) $1 50 547

Contents: History Relationship. Subspecific categories. Meaning of terms Material examined. Taxonomic treatment. Key to species. Descriptions of species. Representative collections examined. Index to collections seen. Index to pertinent names.

Note. A systematic work for botanists which classifies and describes 54 species of Silene found in North America. There are five plates containing drawings of representative Silene plant structure, and two plates of maps showing areal distribution. The descriptions are based on the authors' study of these plants in the laboratory in the field, and in various herbariums.

JONES, GEORGE NEVILLE

American species of Amelanchier with 14 maps and 23 plates. Urbana, Ill. The University of Illinois Press, 1946 126 p illus. 27 cm. (Illinois biological monographs. Vol. XX no. 2) $2 00 548

Contents. Introduction. Taxonomy Bibliography and description of the genus. Keys to species. Description and discussion of species. List of numbered exsiccatae. Plates. Index to plant names.

Note A description for botanists of American species of Amelanchier genus of shrubs and small trees. The work is based on survey of the related literature and on the author's personal study of these plants in various herbariums. Each species is described botanically and its range is given. Type localities and literature references are cited. A set of plates reproduces photographs of branchlets and leaf types.

PRESTON RICHARD JOSEPH, JR.

North American trees (exclusive of Mexico and tropical United States) a handbook designed for field use, with plates and distribution maps. Ames Iowa The Iowa State College Press 1948 371 p illus 20 cm. $4 00. 549

Contents. Introduction Natural relationship of trees. Forest regions of North America. Tree characters. Key to the genera. Handbook of North American trees. Glossary Index.

Note Designed to meet the needs of scientists, students, and general public, this up-to-date field manual is guide to the trees of North America north of Mexico. Both trees native to the area and trees naturalized or commonly planted are included The principal trees (232 species of importance or general interest) are described in the following respects: habit, leaves, fruit, twigs, bark, wood, silvical characters; the leaves, fruit, and other parts are illustrated in line drawings, with 2-inch-square range map to show the distribution of the species. An additional 316 less important species are more briefly described or mentioned in the keys The arrangement is by family with numerous keys to assist in identification. The nomenclature follows the 1944 revision of the U.S. Forest Service check list.

SMITH ALEXANDER HANCHETT

North American species of Mycena. Ann Arbor University of Michigan Press, 1947 521 p illus. 24 cm. (University of Michigan studies Scientific series Vol. XVII) $6.00. 550

ZOOLOGY

GENERAL

BARBOUR, THOMAS

A naturalist in Cuba. Boston Little Brown and Co., 1945 317 p. illus. 21 cm. $3.50 557

Contents: The approach to Cuba. First friends and first tastes. Cubans at home. Reptiles and amphibians. The garden at Soledad. Birds. Cave hunting. Bats. Mammals of long ago. Mammals of today. Cuba's agriculture. Cuba in retrospect. Appendix. Index.

Note: This is a book of pleasant reminiscent reading by a world-famous zoologist who is thoroughly acquainted with the flora and fauna of Cuba. The author himself calls it "a hodgepodge of sociology natural history geology paleontology; mostly my own observations and for that reason alone perhaps worthwhile." However, natural history predominates, and the appeal of the work is chiefly to professional zoologists interested in Dr Barbour's work, and to laymen who pursue nature study or merely read about it. Specific descriptions are included of a number of animal species found in Cuba, but even these are written in non-technical language.

CARR, WILLIAM HENRY

Desert parade a guide to southwestern desert plants and wildlife. Photographs by Marvin H Frost. New York The Viking Press 1947 96 p illus. 22 cm. $2.50 558

Contents: Some useful books. Desert fortunate. Desert mammals. Birds of the desert. Snakes of the desert. Desert lizards and tortoise. Spiders, scorpions, and insects. Desert trees and shrubs. Desert wildflowers and a few "weeds." Desert cacti. Some climate comparisons.

Note: The common plants and animals found in the desert region that includes parts of west Texas, southern New Mexico, Arizona, California, Nevada and Utah are described in popular terms in this book, which is intended for tourists and amateur nature-lovers. The photographs are excellent and well-reproduced.

CLARK AUSTIN HOBART

Animals alive. New York D Van Nostrand Company Inc. 1948 472 p. illus. 24 cm. $4 00 559

Contents (abridged) Part I, Man and the animal world: Background of animal life. Man and his mastery of the animal world. Domesticated birds and insects, and products from wild animals. Animal societies. How other people live. Part II, Land animals: The insects. Spiders and their relatives. Earthworms, snails, slugs, and other land-living invertebrates. Birds. Mammals. The flesh-eating mammals. Reptiles. Part III, Freshwater animals: Animals of swamps, lakes and rivers. The amphibians. Aquatic insects. Fresh-water crustaceans. Fresh-water fishes. Part IV Sea life: The ocean. The exclusively marine animals. The exclusively marine mollusks. Marine gastropods and bivalves. The plant-like animals. Marine fishes. Marine mammals. Sea birds and sea reptiles. Appendix—Classification of animals. Index.

Note. In a terse, non-technical style an outstanding zoologist describes for general readers the animals that inhabit the earth and how they live. Not much space is given to any one animal, and practically no space is given to "wonders" of the type that used to fill up popular natural histories. Even the drawings are conservative and informative, rather than spectacular. Nevertheless, the work is fascinating and achieves its purpose of conveying a panorama of the animal world in relation to its environment and to man.

HATT ROBERT TORRENS AND OTHERS

Island life a study of the land vertebrates of the islands of eastern Lake Michigan by Robert T Hatt, Josselyn Van Tyne, Laurence C. Stuart, Clifford H. Pope, and Arnold B Grobman. Bloomfield Hills Michigan Cranbrook Institute of Science 1948 179 p. illus. 24 cm. (Cranbrook Institute of Science Bulletin no 27) $4.00 560

Contents: Introduction. Geological history Cultural history The islands described. The amphibians and reptiles. The birds. The mammals. Modification of habits. Factors of distribution. Appendix List of the vertebrate faunas arranged by islands. Bibliography Index.

Note The information in this volume is based on investigations carried out from 1937 to 1944 under the auspices of the Cranbrook Institute of Science and the University of Michigan. To provide background material, each of the fourteen islands studied is described as to geology and physical geography The greater part of the book, however consists of a catalogue of all species of animal life found in the islands, with brief notes regarding their abundance, distribution, and special or noteworthy characteristics.

TEXTBOOKS

CURTIS WINTERTON CONWAY, AND MARY J GUTHRIE

Textbook of general zoology Fourth edition. New York John Wiley & Sons Inc., 1947 794 p illus. 24 cm. $4.50 561

Contents Introduction. Vertebrate organ-systems related to metabolism. Vertebrate organ-systems related to irritability Structure and activities of cells in multicellular animals. Reproduction and development in chordates. Heredity and variation. Classification and organization of animals. Unicellular animals—the Protozoa. The simplest multicellular animals—Mesozoa and Porifera. The Coelenterata and Ctenophora. The flatworms—Platyhelminthes and Nemertinea. The roundworms and their relatives—Aschelminthes, Acanthocephala, and Entoprocta. Minor animal phyla. The Mollusca. The segmented worms—Annelida. The Arthropoda. The Echinodermata. The organ-systems of invertebrates. The Chordata. The evolution of animal life. Glossary Index.

Note: (1938) A standard work that has been used in various editions in American colleges for more than twenty years. It provides an inclusive and fairly thorough introduction. Approximately three-sevenths of the space is devoted to general topics such as physiology heredity, and evolution the remainder is used in specific descriptions of the phyla and sub-groups. The only major change in the present edition as compared to the third is the addition of the chapter on the organ-systems of invertebrates. However, minor changes have been made in various parts of the book, particularly in the discussions of heredity and evolution.

GUYER MICHAEL FREDERIC

Animal biology Fourth edition. New York Harper & Brothers, 1948 780 p. illus. 24 cm. $4.50. 562

Contents (abridged) Part I, Introduction Characteristics of living matter Protoplasm and the cell. Classification—learning to name animals. Interpreting animals. Interpreting plants. Biological communities. Ecology Part II, Representative animals. Part III, Organ systems and their functions: Skeletal and integumentary systems. Digestive systems. Respiratory systems. Circulatory systems and circulation. Excretory systems Reproductive systems. Nervous systems and how they operate. Tissues Part IV Origin of the individual: The germ cells and fertilization. Heredity Part V Origin of the kinds of animals; Evolution Significance of the natural system of classification. Evolution. Theories of how evolution has come about. Part VI, Synoptic survey of the animal kingdom The major groups of the animal kingdom. Reference books. Glossary Visual aids. Index.

Note: (1560) A college textbook for use in an introductory course combining zoology and biology. Its purpose is to assist the student in self-orientation by expounding the fundamental principles underlying all life phenomena. While not attempting a survey of the whole animal kingdom, it does present brief, fairly comprehensive analyses of a few significant forms. Throughout the volume, however, application is made to human structures, functions, and problems. In this edition certain sections dealing with protoplasm and the cell, the internal secretions, and the autonomic nervous system have been rewritten in line with recent biological advances. Because of its importance in heredity, a short explanation of the Rh factor in human blood has been added.

POTTER, GEORGE EDWIN
Textbook of zoology. Second edition, with 445 text illustrations. St. Louis, The C. V. Mosby Company, 1947. 948 p. illus. 22 cm. $5.00 563

Contents (abridged): History of zoology. Protoplasm and the cell. Phylum Protozoa in general. Metazoan organization. Phylum Porifera. Phylum Coelenterata. Phylum Ctenophora. Phylum Platyhelminthes. Phylum Nemathelminthes. Phylum Annelida, by J. T. Self. Phylum Echinodermata. Phylum Mollusca, by E. P. Cheatum. Phylum Arthropoda, by V. M. Tanner. Phylum Chordata. The vertebrate animal—subphylum Vertebrata. Class Amphibia, by O. Sanders. Reptilia, by L. T. Murray and J. E. Blaylock. Aves. Mammalia. The endocrine glands and their functions. Regeneration, by T. C. Byerly. Biological effects of radiations, by T. C. Evans. Animal distribution, by W. Hewatt. The animal and its environment, by A. O. Weese. Animal parasitism, by S. H. Hopkins. Marine zoology. Comparative embryology, by A. Richards. Genetics and eugenics, by F. G. Brooks. Animal behavior, by L. C. Gardner. Paleontology, by W. M. Winton. Phylogenetic relations of animal groups and the theory of evolution. Index.

Note: An inclusive textbook which is suitable primarily for use in introductory college courses offered to students who do not plan to specialize in general zoology. Although the greater part of the book is arranged by phyla and smaller taxonomic groups, the exposition is chiefly concerned with function. A special feature is the use as examples for discussion of animals which are readily found in the regions of the United States of America located west of the Mississippi river. An extensive bibliography and also a glossary are included.

WINCHESTER, ALBERT MCCOMBS
Zoology: the science of animal life. New York, D. Van Nostrand Company, Inc., 1947. 437 p. illus. 23 cm. $4.50 564

Contents (abridged): The scope of zoology. Vital animal life processes. Phylum Protozoa. Phylum Porifera. Phylum Coelenterata. Phylum Platyhelminthes. Phylum Annelida. Phylum Echinodermata. Phylum Mollusca. Phylum Arthropoda. Insect orders. Phylum Chordata. Chordate body systems. Aquatic vertebrates. The transition to land. The birds. The mammals. Genetics. Embryology. Adaptation to environment. Glossary. Index.

Note: A textbook intended mainly for use in the survey type of course offered to students who do not plan to study the subject further. It is simply and rather unconventionally written, but it should hold the interest of the average beginner. It is well illustrated and many of the illustrations are from drawings and photographs made by the author.

INVERTEBRATES (EXCEPT INSECTS)

BAKER, FRANK COLLINS
The molluscan family Planorbidae. Collation, revision and additions by Harley Jones Van Cleave. Urbana, Ill., The University of Illinois Press, 1945. 530 p. illus. 26 cm. $14.50 565

Contents: A memorial to Frank Collins Baker (1867–1942). A chronological list of the scientific publications of Frank Collins Baker. Part I, General morphology. General ecology. Nidification and embryological development. Distribution in time and space. Historical sketch of classifications. A new classification of the family Planorbidae. Systematic account of the subfamilies, genera, and subgenera—recent and fossil. Groups of uncertain affinities. Family Bulinidae. Genera wrongly referred to Planorbidae. Bibliography. Part II, The Planorbidae inhabiting North and South America and the West Indies: Descriptions of new species and new varieties. Illustrations of the anatomy and of shells. Index to text. Index to illustrations.

Note: The family Planorbidae constitutes one of the largest groups of fresh-water Mollusca or snails. This monograph provides a detailed description and classification of the family as derived from a study of the anatomy and shell construction. The work was carried on by the author over a period of ten years and entailed the examination of eighty species and races and more than 715 specimens. Part two, which comprises more than half the volume, consists largely of full-page plates illustrating the anatomy and shells of the Planorbidae. The bibliography, although extensive, is limited to only the most important references.

BARTSCH, PAUL
The operculate land mollusks of the family Annulariidae of the island of Hispaniola and the Bahama Archipelago. Washington, D. C., Government Printing Office, 1946. 264 p. illus. 24 cm. (Smithsonian Institution. United States National Museum. Bulletin 192) Paper $0.75 566

Contents: The Annulariidae of Hispaniola. Family Annulariidae. Subfamily Chondropominae. Subfamily Rhytidopominae. Subfamily Annulariinae. The Annulariidae of the Bahamas: Family Annulariidae. Subfamily Chondropominae. Subfamily Rhytidopominae. Subfamily Annulariinae. Index.

Note: A systematic description, with keys and plates. Most of the type specimens are from the collection of the United States National Museum. The publication is in continuation of the several earlier studies by the same author in collaboration with John B. Henderson and Carlos de la Torre, most of which were published in the *Proceedings* of the United States National Museum.

BUCHSBAUM, RALPH
Animals without backbones: an introduction to the invertebrates. Second edition, revised. Chicago, The University of Chicago Press, 1948. 405 p. illus. 23 cm. $6.50; text edition, $5.00 567

Contents: By way of introduction. Life-activities. The first true animals. Classified knowledge. A variety of protozoa. A side issue—sponges. Two layers of cells. Polyps and medusae. Comb jellies. Three layers of cells. The shapes of animals. New parts from old. Free-living and parasitic flatworms. One-way traffic—proboscis worms. Roundworms. Lesser lights. Soft-bodied animals. Two ways of life—clam and squid. Segmented worms—nereis. Earthworms and other annelids. A missing link—peripatus. Jointed-legged animals. The lobster and other arthropods. The grasshopper and other insects. Spiny-skinned animals. Invertebrate chordates. Records of the invertebrate past. Invertebrate relationships. Further knowledge. Index.

Note: (1575) An authentic, easy-to-read, and lavishly illustrated introduction to invertebrate zoology. It is intended for use in college courses, but is also suitable for general readers. In this edition there are about 180 new illustrations, and a newly added final chapter designed to aid the student in the selection of further reading. The attractive format of the first edition has been retained.

CLARK, HUBERT LYMAN
The echinoderm fauna of Australia: its composition and its origin. Washington, D. C., Carnegie Institution of Washington, 1946. 567 p. 25 cm. (Carnegie Institution of Washington. Publication no. 566) Paper $4.00; cloth, $4.50 568

Contents: Introduction. Part I, Annotated list of the echinoderms of Australia, both fossil and recent. General statement. Crinoidea. Asteroidea. Ophiuroidea. Echinoidea. Holothurioidea. Part II, The relationships of the Australian echinoderm fauna. The recent echinoderms of Australia. The extinct echinoderms of Australia. The echinoderms of lands surrounding Australia. The apparent origin of Australia's echinoderm fauna. Bibliography. Index.

Note: (1534) The two parts of this work have differing purposes: the first to serve as an annotated list of the groups down to and including species of the five classes of echinoderms known (to 1941)

to occur in Australia in order to help zoologists and paleontologists identify material with which they are working; the second to discuss the relationships and possible origin of the Australian echinoderm fauna and to compare it with the corresponding faunas of southern and eastern Africa, of India and adjoining seas, of the East Indian and western Pacific islands, and of New Zealand, with the especial aim of throwing some light on the plausibility of the Wegener hypothesis concerning the flotation of continents. The first part describes the various families, genera, and species of Australian echinoderms, and presents keys to all the groups. Absence of illustrations is made up for by references to figures in other publications, including the author's *Echinoderms from Australia*, 1938 (Harvard College. Museum of Comparative Zoology Memoirs. Vol) to which the present volume is in some respects continuation.

CROSS JOY BARNES

The flagellate subfamily Oxymonadinae. Berkeley Calif University of California Press, 1946 162 p illus. 26 cm (University of California publications in zoology Vol. 53 no. 3) Paper $1.25 569

Contents. Introduction. Materials and methods. Special studies of morphology Special studies of reproduction. Reproduction in the subfamily Oxymonadinae. Descriptive and systematic account family Pyrsonymphidae Grassi. Subfamily Oxymonadinae Kirby Genus Oxymonas Janicki. Genus Microrhopalodina Grassi and Foà. Genus Barroella Zeliff. Summary Literature cited. Plates. Index.

Note This paper reports studies and presents systematic account of the subfamily Oxymonadinae, which consists of certain flagellates living as symbionts in the gut of perhaps all of the termites of the family Kalotermitidae, geographically distributed throughout the tropical and subtropical regions of the world.

DURHAM JOHN WYATT

Corals from the Gulf of California and the North Pacific Coast of America. New York The Geological Society of America, 1947 68 p. illus. 25 cm. (The Geological Society of America. Memoir 20) $1 70 570

Contents: Abstract. Introduction and acknowledgments. Earlier work. Composition of Pacific Coast coral faunas. Geographic distribution. Coral reefs. Thermal and bathymetric distribution. Geologic distribution of the Gulf of California corals. Correlation of coral bearing strata of the Gulf of California. Hydrocorallinae occurring from Central America to southeastern Alaska. Systematic descriptions. Description of localities. Bibliography Explanation of plates. Index.

Note: This publication describes and discusses 37 species of corals from the Gulf of California and the North Pacific Coast, including 14 new species and six genera not previously recognized in the area. No species was found common to the Gulf of California and North Pacific Coast faunas, division between them occurring at Cape San Lucas. Tables indicate the bathymetric and thermal distribution of the species

MORRIS, PERCY A.

A field guide to the shells of our Atlantic coast. Illustrated with photographs Boston Houghton Mifflin Company 1947 190 p illus. (part col d) 19 cm. $3 50 571

Contents (abridged) The pelecypods. The gastropods. Glossary of descriptive terms. Index.

Note: Here are descriptions in non-technical language of the marine shells that can be collected along the Atlantic and Gulf coasts of the United States. All of the larger and more common forms are included, and there is considerable discussion also of many of the rarer varieties. The purpose of the book is to aid the amateur naturalist in identifying and classifying the shells he finds. Photographs of more than 400 shells are reproduced as illustrations. Over 100 of them are in full color

RICKETTS EDWARD F AND JACK CALVIN

Between Pacific tides an account of the habits and habitats of some five hundred of the common conspicuous seashore invertebrates of the Pacific Coast between Sitka, Alaska, and northern Mexico Foreword by John Steinbeck, line drawings by Ritchie Lovejoy Revised edition. Stanford Calif Stanford University Press 1948 365 p illus. (part col'd) 24 cm. $6 00 572

Contents: Foreword, by John Steinbeck. Protected outer coast. Open coast. Bay and estuary Wharf piling. Marine plankton of the Pacific Coast. Appendix: Annotated systematic index and bibliography—bibliography of non-specific books and accounts General index.

Note An outstanding book designed for amateur naturalists and laymen whose curiosity is aroused by the life forms of tidal waters. It is engagingly written but somewhat more advanced in content and treatment than the usual popularization of zoological knowledge. The main arrangement is by type of habitat, under which the animals are considered in order of "commonness, conspicuousness and interest. The information about each creature is written in narrative style—not tabulated—and usually covers habitat, appearance, reproductive cycle, and collecting techniques. The illustrations consist chiefly of reproductions of excellent photographs. In this edition, the chapter on plankton is new addition, and there are some new bibliographical citations and new pictures.

ROBERTSON IMOGENE C STRICKLER, AND CLIFFORD L. BLAKESLEE

The Mollusca of the Niagara frontier region and adjacent territory Buffalo N Y Buffalo Society of Natural Sciences, 1948 191 p illus. 23 cm. (Buffalo Society of Natural Sciences. Bulletin Volume 19 number 3) Paper $3.50 573

Contents (abridged) The Mollusca of the Niagara frontier region. Systematic account of the species: Terrestrial gastropods—order Pulmonata—suborder Stylommatophora—suborder Basommatophora. Aquatic pulmonates—order Pulmonata—suborder Basommatophora. Fresh water operculates—order Ctenobranchiata. Fresh water mussels—class Pelecypoda. Order Prionodesmacea—superfamily Naiadacea. The white clams. Order Teleodesmacea. Superfamily Cyrenacea. Bibliography Where and how to collect. The conchological section A history by Imogene C. Strickler Robertson. Members of the conchological section—past and present. Index.

Note: A catalogue and guide to the identification of those species of Mollusca found within an approximate radius of fifty miles from Buffalo, New York. Each species is briefly described as regards outstanding characteristics of the shell and animal itself, and the areas where found are indicated. In most cases the shells are illustrated. The brief descriptions of collecting sites visited by the authors provide the conchologist with geographic guide to the region.

SMITH F G WALTON

Atlantic reef corals a handbook of the common reef and shallow-water corals of Bermuda, Florida, the West Indies and Brazil. Photographs by Frederick M. Bayer Coral Gables, Fla. University of Miami Press, 1948 112 p. illus. 22 cm. $3 75 574

Contents: Distribution of coral reefs throughout the world. Manner of formation of reefs. The western Atlantic reefs. Structure and habits of the living coral. Associates of the living coral. Collection and preparation of corals. List of the western Atlantic reef corals. Identification of the western Atlantic reef corals. Description of the western Atlantic reef corals. Appendices: Glossary of principal technical terms used in coral taxonomy Taxonomic key to genera of western Atlantic corals. Selected bibliography Plates.

Note The purpose of this little volume is to assist collectors of coral, students of marine biology and interested laymen in the identification and recognition of the varieties of corals found in the reef waters of the western Atlantic. The first part of the book provides non-technical account of the life of the coral animal and the formation of coral rock. The second part consists of brief descriptions, both popular and scientific, of fifty-two species of reef corals. In spite of its small size the volume contains several useful keys, selected bibliography glossary and some excellent close-up photographs of corals.

STANTON, TIMOTHY WILLIAM
Studies of some Comanche pelecypods and gastropods Washington, D C. Government Printing Office 1947 256 p illus. 29 cm. (United States. Geological Survey Professional paper 211) Paper $1.50 575

Contents Introduction. Biological analysis. Stratigraphic observations. Geographic distribution. Systematic descriptions: Pelecypoda. Gastropoda Works to which reference is made. Plates 1–67 Index.
Note: This publication includes descriptions of 190 species and varieties of mollusks, of which 131 are gastropods and 59 are pelecypods, and included in which are 73 new species and 7 new varieties of gastropods and 6 new species and 3 new varieties of pelecypods. The fossils on which the report is based were collected, mostly prior to 1903 in Kansas, Oklahoma, Arkansas, Texas, New Mexico, Arizona, and Chihuahua, Mexico. The species and varieties listed are described in detail and illustrated' references are given under the species to known literature, and the locality and position of discovery are specified.

THORP, RAYMOND W AND WELDON D WOODSON
Black widow America's most poisonous spider With a foreword by Emil Bogen Illustrations by the authors. Chapel Hill N C. The University of North Carolina Press, 1945 222 p illus. 21 cm. $3.00 576

Contents Spider lore and legend. Tarantism Other poisonous spiders. Latrodectus around the world. Early reported cases of spider bite in the United States. Investigating Latrodectus mactans. Cumulative medical reports. Spider bite as clinical entity Experiments with Latrodectus on animals. Experiments with Latrodectus on man. Diagnosis and treatment. The black widow before the public. Latrodectus mactans in the arachnid scheme. The life cycle of the black widow spider Diet of the black widow spider. Home-building sites. Artificial control. Natural control Appendices: Unpublished medical reports. Lay histories. Tables. Sources. Index.
Note: A book of general interest, medical interest, and also of reference value. It deals with the only poisonous spider that is indigenous to the United States. The authors collected the information that is included from their own researches, the writings of other authorities, and from correspondence with physicians and other specialists. Many aspects of the subject are dealt with but the major part of the book is concerned with the life habits of the spider and with lay and medical opinions and experience with its bite. Although the writing can readily be understood by general readers, the book is not sensational popularization.

VAN NAME WILLARD GIBBS
The North and South American ascidians. New York American Museum of Natural History 1945 476 p illus 27 cm. (American Museum of Natural History Bulletin Vol. 84 1945) Paper $8 00 577

Contents Descriptions of species Order Aplousobranchia. Family Synoicidae. Family Didemnidae. Family Polycitoridae. Order Phlebobranchia. Family Diazonidae Family Cionidae. Family Perophoridae. Family Ascidiidae. Family Agnesiidae. Family Rhodosomatidae. Family Hypobythiidae Order Stolidobranchia: Family Botryllidae. Family Styelidae. Family Pyuridae Family Molgulidae. Ascidians too incompletely described for classification. Bibliography Index.
Note: A descriptive treatise and catalogue for professional zoologists. It is illustrated with over 500 line drawings and with 31 plates reproduced from photographs. Literature references are given for each species previously described. The introduction provides list of American species of ascidians, short review of the related literature, and information on geographic range anatomical details, classification and nomenclature, means of identification, and methods of collecting and preserving ascidians.

INVERTEBRATES INSECTS

BAERG WILLIAM J
Introduction to applied entomology Third edition, revised. Minneapolis Burgess Publishing Co. 1948 191 p illus 28 cm. $4.00 578

Contents. Introduction. Phylum Arthropoda Class Arachnida. Araneae. Scorpionida. Acarina. Class Myriapoda Chilopoda. Diplopoda. Class Insecta: External anatomy Internal anatomy Reproduction. Metamorphosis. Economic importance of insects. Artificial control measures: Insect pest control. New insecticides. Stomach insecticides. Fumigants. Repellents. Heat. Electricity Table of equivalent amounts. Biological control of insects. Orders of insects: Thysanura. Collembola. Ephemerida. Odonata. Plecoptera. Orthoptera. Isoptera. Dermaptera. Coleoptera. Strepsiptera. Thysanoptera. Corrodentia. Mallophaga. Anoplura. Embiidina. Hemiptera. Homoptera. Neuroptera. Trichoptera. Lepidoptera. Mecoptera. Siphonaptera. Diptera. Hymenoptera.
Note: A textbook for beginning students in applied entomology which covers the more common insects, some spiders and scorpions, and few mites and ticks. The injurious species and the useful ones are given the major emphasis. The subject matter has been selected especially for students preparing for agricultural pursuits Life history accounts and remedial and preventive measures are given in brief for the various families and species. Bibliographical references to other books and articles are included under the various subjects.

BEAL JAMES ALLEN AND CALVIN L. MASSEY
Bark beetles and ambrosia beetles (Coleoptera—Scolytoidea) with special reference to species occurring in North Carolina. Durham N C Duke University School of Forestry 1946 178 p illus. 23 cm. (Duke University School of Forestry Bulletin 10) Paper $1.50 579

Contents Life history and habits. Economic importance. Types of injury Factors affecting bark-beetle abundance. The interrelation of bark beetles and fungi. Control of bark beetles. Types of tunnels. Key to the galleries of the genera of bark beetles. Taxonomic history The superfamily Scolytoidea Key to the families of Scolytoidea —key to the subfamilies of Scolytidae. Classification and description of species: The family Platypodidae Kerbst. The family Scolytidae Gemminger and Harold—the subfamily Hylesininae—the subfamily Micracinae—the subfamily Ipinae. Bibliography Host index. Index to genera and species.
Note. The aim of this monograph is to assemble the currently available information on bark beetles found in North Carolina. The study is based on field work and on survey of the entomological literature; and it is intended for foresters, forestry students, and others who are interested in the biology and control of this woodland pest. The early part of the bulletin has deliberately been made generalized treatment in order to give the volume an applicability to forests outside of North Carolina.

BLACKWELDER RICHARD ELIOT
Checklist of the coleopterous insects of Mexico Central America, the West Indies, and South America. Parts 3–5 Washington D C. Government Printing Office, 1945–47 p 343–925 23 cm. (Smithsonian Institution. United States National Museum. Bulletin 185 parts 3–5) Paper $0 45 $0.50 $0.60. 580

Contents Order Coleoptera: Suborder Polyphaga, continued: Series Synaphlogastra, continued Superfamily Cantharoidea. Superfamily Cleroidea. Superfamily Bostrichoidea. Superfamily Lymexyloidea. Superfamily Mordelloidea. Superfamily Cucujoidea. Superfamily Cucujoidea. Superfamily Chrysomeloidea. Superfamily Curculionoidea. Superfamily Meloidea. Superfamily Tenebrionoidea. Superfamily Platystomoidea. Superfamily Phytophagoidea.
Note (1624a) This publication lists systematically by families and genera the species of beetle known to exist in America south of the United States Along with the scientific names of the species are cited the original publication of the name and the known geographical distribution by countries. The first two parts of the bulletin appeared in 1944 Part 5 completes the Checklist proper but part still to be published is to contain bibliography and index.

BRUES, CHARLES THOMAS

Insect dietary an account of the food habits of insects. Cambridge Harvard University Press, 1946. 466 p illus 21 cm $5.00 581

Contents: Introduction. The abundance and diversity of insects. Types of food habits; their relation to structure and environment. Vegetarianism Herbivorous insects. Gall insects. Fungi and microbes as food; symbiosis with microorganisms. Carnivorism: Predatory insects. Parasitism. Blood-sucking insects and other external parasites. Entomophagous parasites and other internal parasites. Insects as food for man and other organisms. Index.

Note: A useful addition to the literature of entomology because it is devoted to phase of insect behavior which—although it is important in both economic and medical entomology—is necessarily given brief treatment in most books on insects. The subject is covered comprehensively Literature that offers more detailed treatments of specific topics is cited in extensive bibliographies. Although written primarily for students and professional entomologists, the author's style is easy to read and the book can be read with profit by persons trained in other scientific fields.

CARPENTER, STANLEY J., AND OTHERS

The mosquitoes of the southern United States east of Oklahoma and Texas, by Stanley J Carpenter Woodrow W Middlekauff and Roy W Chamberlain. Notre Dame, Ind. The University Press 1946 292 p. illus. 24 cm. (The American midland naturalist. Monograph series. No. 3 Theodor Just, editor) $4.00. 582

Contents (abridged) Bionomics and relation to disease Life history Medical importance. Technique Collecting adults. Collecting mosquito eggs. Collecting larvae. Characters used in identification. Family Culicidae. Subfamily Culicinae. Tribe Anophelini. Tribe Megarhinini. Tribe Culicini. Bibliography Index.

Note: The major part of this book is devoted to catalogue of mosquitoes, arranged by tribe and genus. The distinguishing characteristics of the adult male, female, and larva of each species are given, and notes concerning distribution, bionomics, and medical importance are included. There are 155 figures reproduced from well-executed line drawings. In order to make the book of practical value to entomologists and public health workers, brief instructions are given for collecting and studying mosquitoes. The eight-page bibliography consists largely of recent and readily available references.

CURRAN CHARLES HOWARD

Insects of the Pacific world New York The Macmillan Company 1945 317 p. illus. 21 cm. (The Pacific world series) $3 75 583

Contents: Foreword, by Fairfield Osborn. Introduction. Insects and their relatives. True flies—order Diptera. Bees, wasps, and ants—order Hymenoptera, by Herbert F Schwarz. Butterflies, moths and skippers—order Lepidoptera Beetles—order Coleoptera, by John C. Pallister True bugs—order Hemiptera, by John C. Pallister Clear-wing bugs—order Homoptera. Dragon-flies and damsel-flies—order Odonata, by Elsie B. Klots. Nerve-winged insects—the neuropteroids. Grasshoppers, katydids, crickets, cockroaches, walking-sticks, and mantids—order Orthoptera. The "small" orders. Spiders, scorpions, ticks, and mites—arachnids and allies, by Willis J. Gertsch. Insects and disease. Collecting, preserving, and shipping insects. Index.

Note: A popular handbook. It is not written in the typical style of field manuals but is composed in narrative style. The information given was selected to aid in the observation of insect life, to promote an understanding of insects as part of the biological pattern, and to encourage soldiers stationed in the Pacific area to collect and to preserve specimens for scientific institutions in the United States. The result is readable book that will be useful to amateur naturalists and general readers who seek information on the insects of these regions. The series of which the book is part was prepared under the auspices of the American Committee for International Wild Life Protection.

ENGELHARDT GEORGE PAUL

The North American clear-wing moths of the family Aegeriidae. Washington D C. Government Printing Office, 1946 222 p illus. (part col'd) 24 cm. (Smithsonian Institution. United States National Museum. Bulletin 190) Paper $0 75 584

Contents: Foreword, by Carl Heinrich. Definition and classification. Key to groups of Aegeriidae based on antennae and male genitalia. Key to North American genera of Aegeriidae. The Synanthedon group. The Sesia group. The [illegible] group. The [illegible] group. The Paranthrene group. The Aegeria group. The [illegible] group. The Bembecia group. The Zenodoxus group. Explanation of plates. Index to genera, species, and lower categories. Food plant index.

Note: Presents systematic descriptions of the genera and species of the Aegeriidae moths of North America. The family is of economic importance because of the widespread damage inflicted on American fruits and trees by some of the larvae of the Aegeriidae. Included in the family are the forms known to orchardists, gardeners, and foresters as peachtree borer persimmon borer strawberry crown moth, grapevine root borer maple bark borer squash borer and hornet moth. Illustrations include sixteen colored plates presenting pictures of the principal species in their adult form. The work was not entirely finished at the time of the author' death, and it was prepared for publication by his associates, August Busck and Carl Heinrich.

HALL, DAVID G

The blowflies of North America. [Baltimore,] 1948 477 p. illus. (part col d) 23 cm. (The Thomas Say Foundation publications. Vol. IV) $6.50 [To be ordered from J J Davis, Department of Entomology Purdue University Lafayette Indiana] 585

Contents: Introduction History of the classification of the Calliphoridae. Importance of blowflies to man. Control of blowflies. Methods of collecting blowflies. Preservation of specimens. Explanation of terms. Variation. Technique. Synonymy Classification. Key to major taxonomic units of North American muscoid flies. Family Calliphoridae Mesembrinellinae. Rhiniinae. Chrysomyinae. Calliphorinae. Polleniinae. Literature. Plates and explanations. Index.

Note This volume presents taxonomic account of the species of Calliphoridae now known to occur in continental North America north of the Panama Canal Zone and in the West Indies north of Jamaica. Eighty-three species belonging to twenty-seven genera are described, of which fifteen species and six genera were not found previously recorded. The keys and illustrations, of which some are in color, were designed to assist in rapid determination of species. The work was prepared especially for the use of entomologists, public health officials, physicians, veterinarians, biologists, and students.

HORVÁTH, GÉZA, AND OTHERS, editors

General catalogue of the Hemiptera. Géza Horváth, W E. China, and H. M. Parshley editors. Northampton, Mass. Smith College, 1945–48 23 cm. Paper Fasc. IV Parts 4 5 6 and 7 $2 75, part 8 $3.00 part 9 $4 00 part 10 $1.50 Fasc. V $0 60 586

Contents: Fascicle IV *Fulgoroidea:* Part IV Derbidae, by Z. P Metcalf. Part Achilixiidae, by Z. P Metcalf. Part VI, Meenoplidae, by Z. P Metcalf. Part VII, Kinnaridae, by Z. P Metcalf. Part VIII, Dictyopharidae, by Z. P Metcalf. Part IX, Fulgoridae, by Z. P Metcalf. Part X, Achilidae, by Z. P Metcalf. Fascicle VI Polyctenidae, by R. L. Usinger.

Note Additional parts of the comprehensive catalogue of the Hemiptera of the world, which is described more fully under number 1616 in *Scientific, medical and technical books published in the United States of America, 1930–1944*

HUBBARD CLARENCE ANDRESEN

Fleas of western North America their relation to public health. Ames, Iowa The Iowa State College Press, 1947 533 p illus. 24 cm. $6.00 587

Contents: Part I: Students of western American fleas, their contributions. The medical importance of fleas. Field and laboratory

technique. The anatomy of the flea in relation to its taxonomy. Part II: Prehistory. The order Siphonaptera: Family Hectopsyllidae; family Pulicidae; family Dolichopsyllidae; family Hystrichopsyllidae; family Ischnopsyllidae. Part III Host index: The hosts of western rodent fleas. The fleas of western carnivora. The fleas of western insectivora. The fleas of western bats. The fleas reported from man. The fleas of western birds. Selected bibliography Index.

Note (1617a) This catalogue of the fleas found in that part of North America lying west of the 100th meridian is based largely on the author's personal investigations and study. Each entry for the 303 fleas listed includes a drawing and description of outstanding physical characteristics, area in which found, when first identified and by whom, the preferred host, and (when known) the medical and economic importance. The catalogue proper is followed by a description of the various animal hosts and a listing of the types of fleas found on each. The bibliography supplements W. L. Jellison and N. E. Good, *Index to the literature of Siphonaptera of North America*, Washington, D. C., 1942.

KIRBY HAROLD

Devescovinid flagellates of termites. IV The genera Metadevescovina and Pseudodevescovina. Berkeley University of California Press, 1945 72 p. illus. 27 cm. (University of California. Publications in zoology Vol. 45 no 4) $1.25 588

Contents: Descriptive and systematic account. Genus *Metadevescovina* Light. Morphology and diagnosis of species of *Metadevescovina*. Genus *Pseudodevescovina* Sutherland. Morphology and diagnosis of species of *Pseudodevescovina*. Summary Literature cited. Plates.

Note The fourth part of a comprehensive account of a large and diversified group of Protozoa which live in the intestinal tracts of termites. The descriptions are concerned chiefly with morphology and are very detailed. Numerous references are given to related literature. The illustrations—reproductions of drawings made with the aid of the camera lucida—are exceptionally good. Parts I, II, and III were published in 1941 and 1942 part v was published in 1949

LILJEBLAD EMIL

Monograph of the family Mordellidae (Coleoptera) of North America, north of Mexico Ann Arbor University of Michigan Press 1945 229 p illus. 26 cm. (Museum of Zoology University of Michigan. Miscellaneous publications. no 62) Paper $2.00 589

Contents: Introduction. The Mordellidae. *Glipodes* Leconte. *Conalia* Mulsant and Rey *Isotrilophus*, new genus. *Glipa* Leconte. *Mordella* Linnaeus. *Tomoxia* Costa. *Mordellistena* Costa. *Diclidia* Leconte. *Pentaria* Mulsant. *Naucles* Champion. *Sphingocephalus*, new genus. *Anaspis* Geoffroy *Zilora* Mulsant. *Lorisia* Emery *Nasalpe* Emery Bibliography Index of genera and species

Note A new systematic classification of a family of beetles, of which fifteen genera, including 113 species, are found in North America, north of Mexico. It is based on the examination of more than twenty thousand specimens. The work supersedes Leconte's *Synopsis of the Mordellidae of the United States*. Approximately 130 original drawings are reproduced on six plates.

MUESEBECK, CARL FREDERICK WILLIAM editor

Common names of insects approved by the American Association of Economic Entomologists Preprinted November 14 1946 from Journal of economic entomology 39 (4) 427 <Edited and approved by the Committee on Common Names of Insects American Association of Economic Entomologists. List prepared for publication by C F W Muesebeck chairman.> College Park, Md American Association of Economic Entomologists 1946 [22 p.] 25 cm. Paper $0.50 590

Contents. Insects listed by common names. Insects listed by scientific names.

Note This preprint consists of a brief introduction and two alphabetical lists of names of insects, one listing the approved English names followed by their respective approved scientific counterparts, the other listing the approved scientific names followed by their respective approved English equivalents. The 1946 list supersedes and voids all previous lists of approved common names published by the Association.

OMAN, PAUL WILSON, AND ARTHUR D CUSHMAN

Collection and preservation of insects. Washington D C. Government Printing Office, 1946 42 p. illus. 23 cm. (United States. Department of Agriculture. Miscellaneous publication no 601) Paper $0 15 591

Contents: What to collect. Equipment and collecting methods: Nets. Killing bottles. Aspirator or suction bottle. Beating cloth, or umbrella. Sifters. Separators Collecting at lights. Baits and bait traps. Tweezers, forceps, and brushes. Rearing. How to kill and preserve specimens. Care and handling of unmounted specimens. How to mount insects. Labeling the specimens. Care of the collection. Packing and shipping specimens. Recognition of material. Thysanura. Collembola. Orthoptera. Isoptera. Plecoptera. Ephemeroptera. Odonata. Psocoptera. Mallophaga. Anoplura. Thysanoptera. Homoptera. Coleoptera. Neuroptera. Zoraptera. Megaloptera. Mecoptera. Trichoptera. Lepidoptera. Diptera. Siphonaptera. Hymenoptera.

Note: A manual in pamphlet form, this publication presents basic information on collecting and preserving insects and on recognition of the general insect groups. It was prepared in response to numerous requests received by the Department of Agriculture from farmers, students, and others interested in obtaining first-hand knowledge of insects by collecting them.

PETERSON ALVAH

Larvae of insects, an introduction to nearctic species. Part I Lepidoptera and plant infesting Hymenoptera. Columbus, Ohio The author Ohio State University 1948 315 p. illus 28 cm. $5 00 592

Contents (abridged) Importance of larval recognition. Equipment and instruction. Collecting, killing, dissecting and preserving larvae. Inflating and rearing larvae. Keys to orders for immature stages of nearctic insects nymphs, larvae, and pupae. Condensed key to orders for larvae of holometabolous insects. Selected general bibliography on nymphs and larvae of insects. Larvae of Lepidoptera. Key to families of Lepidoptera. Key to injurious Pyralidae. Family names of Lepidoptera. Descriptions of larvae of Lepidoptera. List of some common, important, or unusual species of Lepidoptera. Selected bibliography for larvae of Lepidoptera. Larvae of Hymenoptera. Key to families of plant-infesting Hymenoptera. List of some common, important, or unusual plant-infesting species of Hymenoptera. Selected bibliography for larvae of Hymenoptera. Glossary Host index of Hymenoptera. Host index of Lepidoptera. General index.

Note: The first of a projected two-part work, this volume presents drawings, keys, and text descriptive of the larval stages of two important orders of insects, as well as the introductory matter for the work as a whole. The book is a guide for students endeavoring to learn facts essential for identification of insect larvae. Illustrative drawings are both numerous and detailed. Altogether there are 84 plates of illustrations. Particular emphasis is placed upon larvae of economic importance. Part II is to cover Coleoptera, Diptera, Siphonaptera, Neuroptera, Trichoptera, and Mecoptera.

PIERCE, GEORGE WASHINGTON

The songs of insects, with related material on the production propagation detection and measurement of sonic and supersonic vibrations. Cambridge Harvard University Press, 1948 329 p. illus. 24 cm. $5.00. 593

Contents Introduction and background. Preliminary experiments. Collection of insects located by sound. Mechanism of sound production by insects. Apparatus and methods. Tabulation of insects studied. Crickets: family Gryllidae subfamily Gryllinae, genus Gryllus. Crickets: subfamily Gryllinae, genus Nemobius. Crickets:

family Oecanthinae. Katydids: family Tettigoniidae, subfamilies Pseudophyllinae and Pseudophyllinae. Katydids: subfamilies Copiphorinae, Conocephalinae and Decticinae. Locusts: family Acrididae, subfamilies Tryxalinae and Oedipodinae. Cicadas: family Cicadidae. Evolution of wing resonance. Birds and bats. Appendix: performance of the apparatus.

Note: In this book the results of an extensive series of investigations with special apparatus devised for the purpose are presented. The experiments are conducted from the standpoint of extending knowledge of acoustics, especially of radiation in the frequencies above audible sound but there is included necessarily good deal of information on the sound organs of insects. The more than figures include some photographs of insects and their sound organs and many reproductions of photographic recording of their songs.

ss, Herbert Holdsworth

A textbook of entomology New York John Wiley & Sons Inc., 1948 532 p. illus. 24 cm. $6.00 594

Contents: Growth of North American entomology. Arthropoda—insects and their allies. External anatomy. Internal anatomy. Physiology. The life cycle. The orders of insects. Geological history of insects. Ecological considerations. Control considerations. Index.

Note: A general introduction to the fundamental aspects of the subject, in which specialized information is largely omitted so that the reader will obtain a view of entomology as a biological science. The first chapter provides an interesting historical sketch of the development of the science, and the chapter on geological history traces the evolution of insects. The book is generously illustrated, and there are lists of books and articles for further reading. In addition to its intended use in college classes, the work has value for the serious amateur as a supplement to the more common manuals on collecting and classification.

ssell, Louise May

The North American species of whiteflies of the genus *Trialeurodes* Washington D. C. Government Printing Office, 1948 85 p. illus. 23 cm. (United States. Department of Agriculture. Miscellaneous publication no. 635) Paper $0.25 595

Contents: Introduction. Host associations. Characters of value. Terminology. Illustrations. Genus *Trialeurodes* Cockerell. Key to species of *Trialeurodes*. Treatment of species. A species erroneously assigned to *Trialeurodes*. Species treated and their synonyms. Literature cited. Index to host plants. Index to whiteflies.

Note: This pamphlet describes and illustrates type specimens of the North American species of *Trialeurodes*, with the purpose of aiding in their recognition, indicating synonymy, recording the hosts and distribution of the insects concerned, and disseminating other information about the genus. The work is based primarily on a morphological study of the fourth instar, the stage commonly known as the pupa case or pupa.

ain Ralph Brownlee

The insect guide orders and major families of North American insects. Illustrated by Su Zan N Swain. Garden City N Y Doubleday & Co Inc. 1948 261 p illus. (part col'd) 20 cm. $3.00 596

Contents (abridged): About insects in general. Order and family ..., grasshopper and cricket order (Orthoptera). Termite order (Isoptera). Bug, aphid and scale order (Hemiptera). Nerve-winged ... (Neuroptera). Moth and butterfly order (Lepidoptera). Beetles (Coleoptera). Wasp, ant and bee order (Hymenoptera). Fly order (Diptera). Collecting, preserving and studying insects. Index.

Note: A pocket-sized field book in which are described and pictured the common insects of the United States and Canada. It is designed as a field book for naturalists; accordingly the language is non-technical as possible. Of the nearly 300 illustrations, approximately 171 are in full color. Description of a typical insect includes shape, size, and color of adults and young, life habits, habitat, geographic range, and the economic importance, if any. There are pages of carefully selected references. The author is associated with the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture.

VERTEBRATES (EXCEPT BIRDS AND MAMMALS)

Bigelow, Henry Bryant and others

Fishes of the western North Atlantic. Part one Lancelets cyclostomes sharks. New Haven Sears Foundation for Marine Research, Yale University 1948 576 p illus. 31 cm. (Sears Foundation for Marine Research. Memoir number 1) $10.00 597

Contents: Introduction, by John Tee-Van, editor-in-chief. Lancelets, by Henry B. Bigelow and Isabel Pérez Farfante: Class Leptocardii. Order Amphioxi. Cyclostomes, by Henry B. Bigelow and William C. Schroeder: Class Agnatha: Subclass Cyclostomata: Order Myxinoidea. Order Petromyzonida. Sharks, by Henry B. Bigelow and William C. Schroeder: Class Chondrichthyes. Subclass Elasmobranchii. Order Selachii: Suborder Notidanoidea. Suborder Chlamydoselachoidea. Suborder Heterodontoidea. Suborder Galeoidea. Suborder Squaloidea. Suborder Pristiophoroidea. Suborder Squatinoidea. Index of common names. Index of scientific names.

Note: *Fishes of the western North Atlantic* is the title of a projected series of uniform volumes being published by the Sears Foundation for Marine Research under the direction of an editorial board whose editor-in-chief is John Tee-Van. When completed the set is intended to present a comprehensive scientific account written by various authors of the fish fauna of the Atlantic Ocean from Hudson Bay southward to the mouth of the Amazon River. The accounts of the various species and groups are to be uniform in style and arrangement and to be published in systematic order. The text is to contain facts and information based upon new revisions, original research, and critical reviews of existing information. In the present volume, the accounts of the lancelets and cyclostomes cover fifty-eight pages, while the account of the sharks extends from page fifty-nine through page 546. Under each species is a detailed description, together with a discussion of its distinguishing characteristics, color, size, general habits, abundance, range, and relation to man—economic importance, danger, sporting qualities. Bibliographical citations are given for each species under the heading "Synonyms and references," and there are additional references included in the footnotes. The illustrations, of which there are 106, are line drawings showing lateral, dorsal, or ventral aspects, as well as head, fin, and teeth forms of the different species. The primary purpose of the work as a whole is "to bring together and synthesize" scattered ichthyological information and "to make it available to both the public and to marine biologists. Since the set is intended for the use of lay persons as well as ichthyologists, highly technical words and phrases are being avoided as far as possible.

Eddy, Samuel, and Thaddeus Surber

Northern fishes, with special reference to the Upper Mississippi valley Revised second edition Minneapolis, Minn. The University of Minnesota Press 1947 276 p illus. (part col'd) 23 cm. $4.00 598

Contents: A fisherman's luck. Fishing technique. Lake dynamics. Fish populations. Management of waters for fish production. Improvement of lakes and streams. Laws and propagation. Parasites of fishes. The structure of fishes. Classification and origin of fishes. Artificial key to families of common fishes. The cyclostomes. Petromyzonidae (the lamprey family). The ostiechthyes or bony fishes. Polyodontidae (the paddlefish family). Acipenseridae (the sturgeon family). Lepisosteidae (the gar family). Amiidae (the bowfin family). Hiodontidae (the mooneye family). Clupeidae (the herring family). Osmeridae (the smelt family). Coregonidae (the whitefish family). Salmonidae (the salmon and trout family). Catostomidae (the sucker family). Cyprinidae (the minnow family). Ameiuridae (the North American catfish family). Umbridae (the mudminnow family). Esocidae (the pike family). Anguillidae (the eel family). Cyprinodontidae (the killifish family). Percopsidae (the troutperch family). Aphredoderidae (the pirateperch family). Serranidae (the sea bass family). Percidae (the perch family). Centrarchidae (the sunfish family). Atherinidae (the silverside family). Sciaenidae (the drum family). Cottidae (the sculpin family). Gasterosteidae (the stickleback family). Gadidae (the codfish family). Bibliography. Index.

Note: (1457) An interesting and useful combination of fisherman's lore and ecological information. All of the species and subspecies that are native or have been introduced into the lakes and streams of Minnesota and nearby territory are described and pictures of many of them are included. In this edition the text of the first

technique. The anatomy of the flea in relation to its taxonomy Part Preliminary The order Siphonaptera. Family Hectopsyllidae; family Pulicidae; family Dolichopsyllidae family Hystrichopsyllidae; family Ischnopsyllidae. Part III Host index: The hosts of western rodent fleas. The fleas of western carnivora. The fleas of western insectivora. The fleas of western bats. The fleas reported from man. The fleas of western birds. Selected bibliography Index.

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KIRBY HAROLD

Devescovinid flagellates of termites. IV The genera Metadevescovina and Pseudodevescovina. Berkeley University of California Press, 1945 72 p illus. 27 cm. (University of California. Publications in zoology Vol. 45 no 4) $1.25 588

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Note The fourth part of comprehensive account of large and diversified group of Protozoa which live in the intestinal tracts of termites. The descriptions are concerned chiefly with morphology and are very detailed. Numerous references are given to related literature. The illustrations—reproductions of drawings made with the aid of the camera lucida—are exceptionally good. Parts I, II, and III were published in 1941 and 1942 part was published in 1949.

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MUESEBECK CARL FREDERICK WILLIAM editor

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Note A manual in pamphlet form, this publication presents basic information on collecting and preserving insects and on recognition of the general insect groups. It was prepared in response to numerous requests received by the Department of Agriculture from farmers, students, and others interested in obtaining first-hand knowledge of insects by collecting them.

PETERSON, ALVAH

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Note The first of projected two-part work, this volume presents drawings, keys, and text descriptive of the larval stages of two important orders of insects, as well as the introductory matter for the work as whole. The book is guide for students endeavoring to learn facts essential for identification of insect larvae. Illustrative drawings are both numerous and detailed. Altogether there are 84 plates of illustrations. Particular emphasis is placed upon larvae of economic importance. Part II is to cover Coleoptera, Diptera, Siphonaptera, Neuroptera, Trichoptera, and Mecoptera.

PIERCE GEORGE WASHINGTON

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Note: In this book the results of an extensive series of investigations with special apparatus devised for the purpose are presented. The experiments were conducted from the standpoint of extending the knowledge of acoustics, especially of radiation in the frequencies just above audible sound but there is included necessarily a good deal of information on the sound organs of insects. The more than 240 figures include some photographs of insects and their sound organs and many reproductions of photographic recording of their songs.

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Russell Louise May

The North American species of whiteflies of the genus *Trialeurodes* Washington D C. Government Printing Office 1948 85 p. illus. 23 cm. (United States Department of Agriculture. Miscellaneous publication no 635) Paper $0.25 595

Contents: Introduction. Host associations. Characters of value. Terminology Illustrations. Genus *Trialeurodes* Cockerell. Key to species of *Trialeurodes*. Treatment of species. A species erroneously assigned to *Trialeurodes*. Species treated and their synonyms. Literature cited. Index to host plants. Index to whiteflies.

Note: This pamphlet describes and illustrates type specimens of 31 North American species of *Trialeurodes*, with the purpose of assisting in their recognition, indicating synonymy, recording the hosts and distribution of the insects examined, and summarizing other information about the genus. The work is based primarily upon a morphological study of the fourth instar the stage commonly known as the pupa case or pupa.

Swain Ralph Brownlee

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VERTEBRATES (EXCEPT BIRDS AND MAMMALS)

Bigelow, Henry Bryant and others

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Note: *Fishes of the western North Atlantic* is the title of a projected series of uniform volumes being published by the Sears Foundation for Marine Research under the direction of an editorial board whose editor-in-chief is John Tee-Van. When completed the set is intended to present a comprehensive scientific account written by various authors of the fish fauna of the Atlantic Ocean from Hudson Bay southward to the mouth of the Amazon River. The accounts of the various species and groups are to be uniform in style and arrangement and to be published in systematic order. The text is to contain facts and information based upon new revisions, original research, and critical reviews of existing information. In the present volume, the accounts of the lancelets and cyclostomes cover fifty-eight pages, while the account of the sharks extends from page fifty-nine through page 544. Under each species is a detailed description, together with a discussion of its distinguishing characteristics, color, size, general habits, abundance, range, and relation to man—economic importance, danger, sporting qualities. Bibliographical citations are given for each species under the heading "Synonyms and references," and there are additional references included in the footnotes. The illustrations, of which there are 106, are line drawings showing lateral, dorsal, or ventral aspects, as well as head, fin, and tooth forms of the different species. The primary purpose of the work as a whole is "to bring together and synthesize" scattered ichthyological information and "to make it available to both the public and to marine biologists. Since the set is intended for the use of lay persons as well as ichthyologists, highly technical words and phrases are being avoided as far as possible.

Eddy Samuel, and Thaddeus Surber

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Note: (1437) An interesting and useful combination of fisherman's lore and zoological information. All of the species and subspecies that are native or have been introduced into the lakes and streams of Minnesota and nearby territory are described and pictures of many of them are included. In this edition the text of the first

tity pages has been rearranged and expanded; a few illustrations have been added and a few additional fish records have been included. The book is suitable for amateur naturalists, conservation workers, and sportsmen who are interested in the habits and life histories of the fish they catch.

HILDEBRAND, SAMUEL FREDERICK

A descriptive catalog of the shore fishes of Peru. Washington, D C. Government Printing Office 1946 530 p. illus 25 cm. (Smithsonian Institution. United States National Museum. Bulletin 189) Paper $1 25 599

Contents: Introduction Literature on the fishes of Peru. Scope of the catalog. Specimens examined Explanations Range and distribution of species. Definitions of technical terms used in the text. Systematic catalog. List of new species and subspecies described. Literature cited. Index.

Note Describes 364 species of shore fishes from Peru, 31 for the first time. Each family is described in order Keys to the genera follow the family descriptions, and within the generic descriptions are keys to the species. Each species is described, measurements quoted of type specimens, range indicated, and references given to previous descriptions of the species. Technical terms are avoided as far as possible in order to make the work of maximum use to the general biologist, the beginner and the layman.

HUBBS CARL LEAVITT, AND KARL F LAGLER

Fishes of the Great Lakes region. Bloomfield Hills Mich. Cranbrook Institute of Science, 1947 186 p. illus. (part col d) 24 cm. (Cranbrook Institute of Science. Bulletin no. 26) $3 00 600

Contents. Anatomical features, terms and methods of counting, measuring, collecting and preserving. Key to the families. Keys and species accounts Lamprey family Paddlefish family Sturgeon family Gar family Bowfin family Mooneye family Herring family Salmon family Whitefish family Grayling family Smelt family Sucker family Minnow family North American catfish family Mudminnow family Pike family Freshwater eel family Killifish family Livebearer family Cod family Troutperch family Pirate-perch family Bass family Perch family Sunfish family Silverside family Drum family Sculpin family Stickleback family List of references. Halftone plates Index.

Note. (1458g) The aim of this work is to present a guide for both amateur and professional zoologists to the identification, range, and ecology of the fishes of the Great Lakes drainage basin. It is an expansion of the authors *Guide to the fishes of the Great Lakes and tributary waters* Bloomfield Hills, Mich., 1941 and this edition has been improved with many more illustrations, with popular accounts of the various families, with additional information on ranges. There are now twenty-six color plates and 151 illustrations in black and white.

LOVERIDGE, ARTHUR

Reptiles of the Pacific world. New York The Macmillan Company 1945 259 p. illus 21 cm. (The Pacific world series) $3 50 601

Contents Island reptiles and how they got there What is a reptile?—The tuatara. Turtles, terrapins, and tortoises. Gavial and crocodiles. Lizards. The amphisbaenous snakes. Poisonous land snakes of the cobra family Poisonous sea snakes. Poisonous land snakes of the viper family Snake bite and first aid treatment. Economic aspects of reptiles and need for protection. A brief survey of the Pacific amphibians. Suggestions for safe shipment of living reptiles. Hints on collecting specimens when on active service Chart showing distribution of reptiles and amphibians. Useful English works on Oriental herpetology Index to, and systematic list of, species mentioned.

Note A handbook of general information about reptiles and amphibians to be found in the Pacific area, especially those occurring in the lands west of New Guinea from the Dutch East Indies to Japan. The abundant and conspicuous forms have been selected for special description and interesting facts are given concerning their temperament, breeding habits, favorite food, and the nature of their enemies and defense. Like other volumes in the series, it is addressed primarily to amateur naturalists.

MORRIS, PERCY A.

Boy's book of snakes how to recognize and understand them. New York The Ronald Press Company 1948 185 p illus. 24 cm. (Humanizing science series) $3 00 602

Contents. What is a snake? False lore of snakes Harmless snakes of garden and barnyard. Harmless snakes of field and pasture. Harmless snakes of wooded areas. Harmless snakes of ponds and marshes. Poisonous snakes of the United States. Nonpoisonous snakes of other lands. Poisonous snakes of other lands. The care and feeding of snakes. List of authorities cited. Books for further reading. Classification of United States snakes. Classification of foreign snakes. Index.

Note A well-illustrated book that describes in simple language the appearance, life habits, geographic range, and the principal points for recognition of the world's important snakes. The author explains which snakes are beneficial to man and which are injurious. He further tells how to catch harmless snakes, how to keep them as pets, and he mentions what to do in case of snakebite from a venomous snake. Although intended mainly for juvenile readers, the book is suitable also for adults who desire elementary information on snakes. The author is Chief Preparator of the Peabody Museum of Natural History

NICHOLS JOHN TREADWELL, AND PAUL BARTSCH

Fishes and shells of the Pacific world. New York The Macmillan Company, 1945 201 p. illus. 21 cm. (The Pacific world series) $3.00 603

Contents Part I, General review of the fishes, by John T Nichols: Origin and distribution of Pacific fishes. Different kinds of fishes. Collecting specimens. Part II, Fishes of particular interest, by John T Nichols Sharks and rays. Important fish groups. Peculiar fishes. Game-fishes Part III, Shells, by Paul Bartsch Characteristics of shells. Systematic review Instructions for collecting mollusks Reference works. Index for fishes Index for shells. Explanation of plates.

Note. Part I of this popular handbook consists of a general discussion of the kinds of fishes to be found in the Pacific area and their outstanding characteristics There are simple line drawings to assist the observer in placing the fish he encounters. Part II is more for reference than general reading and gives scientific names and means of identifying the specimens of salt water "shorefish," that are widely distributed and most likely to attract attention. Part III, which is devoted to shellfish, reviews their general characteristics, distribution, and classification and describes those most commonly found. Photographic illustrations of many varieties of shells will aid in identification. There is an index for both fishes and shells which includes common and scientific names and refers to illustrations as well as textual material.

PICKWELL GAYLE

Amphibians and reptiles of the Pacific States Stanford University Calif Stanford University Press 1947 236 p illus. (part col d) 26 cm. $4.00 604

Contents Introduction. Amphibians of the Pacific States. Reptiles of the Pacific States. Life habits of amphibians of the Pacific States. Life habits of reptiles of the Pacific States. Collecting, handling, and care of amphibians and reptiles. Plates I-XXVI Amphibians and reptiles. Appendix Keys to the amphibians and reptiles Glossary Bibliography Index.

Note A well-written manual of the amphibians and reptiles which are found in the states of Washington, Oregon, and California. Most of the descriptions are based on direct observations of the author or his students, and most of the illustrative material, also, is original. The book is semi-popular in the sense that it can be understood and will be useful to amateur naturalists However the keys and the information on habits are of interest to the professional herpetologist as well. Identification and habits are emphasized. The bibliography includes both the popular and the scientific literature.

SCHULTZ, LEONARD PETER, AND EDITH M STERN

The ways of fishes. New York D Van Nostrand Company Inc. 1948 264 p illus. 24 cm $4.00. 605

Contents: Migration. Locomotion. Hibernation and estivation. Fishes dangerous to man. Feeding habits. Association with other animals. Fighting fishes. Males that incubate. Electricity and luminescence. Sound and sight. Ocean beach spawners. Giants and dwarfs. Nest builders in streams. Fishes controllable by man. Home aquaria their A B C's. Fishes suitable for aquaria. Appendix—Classification of fishes. General index. Index of scientific names.

Note The strange ways of fishes are the subject of this book, written by the Curator of Fishes of the Smithsonian Institution. It was not the author's intention to present an orderly study of fish behavior but rather to describe instances of seemingly bizarre and curious habits or physical characteristics of certain fishes. The book can be read with enjoyment by students of natural history aquarium visitors, general readers with flair for curious knowledge and even by professional ichthyologists.

SMITH HOBART MUIR

Handbook of lizards lizards of the United States and Canada. Ithaca, N Y Comstock Publishing Company 1946 557 p illus. 24 cm. (Handbooks of American natural history edited by Albert Hazen Wright. Vol. VI) $5 75 606

Contents: Part I, Introduction Zoological position. Characteristics. Distribution. Major groups. Fossil history Structure. Habitats. Life history Habits. Folklore. *Economic importance. In captivity* Collecting. Preserving. American herpetologists. Problems. Part II, Accounts of species: Key to families. Family Gekkonidae Family Iguanidae. Family Xantusiidae. Family Scincidae. Family Lacertidae. Family Teiidae. Family Amphisbaenidae. Superfamily Anguinoidea: Family Anguidae. Family Helodermatidae. Family Anniellidae. Distribution maps. General literature. State lists of species and literature. Literature cited. Index.

Note: A comprehensive manual of general and scientific information on American lizards. The species treated include all native forms recorded, all exotic species established, and few species never authentically reported but possibly occurring. For each species is given so far as possible common name, scientific name, photograph, range, size color evolution, recognition characters, habits and habitat, problems, bibliographical references. There are 41 distribution maps and three separate bibliographies. The photographic illustrations, which number in the hundreds, are mostly from photographs taken over many years by Dr Albert Hazen Wright and Mrs. Anna Allen Wright.

SMITH HOBART MUIR, AND EDWARD H. TAYLOR

An annotated checklist and key to the Amphibia of Mexico Washington D C. Government Printing Office 1948 118 p 24 cm. (Smithsonian Institution. United States National Museum. Bulletin 194) Paper $0.50 607

Contents: Introduction. Class Amphibia: Key to Mexican orders of Amphibia. Order Gymnophiona. Order Caudata. Key to Mexican suborders of Caudata. Suborder Meantes. Suborder Ambystomatoidea. Suborder Salamandroidea. Suborder Plethodontoidea. Order Salientia. Key to Mexican suborders of Salientia. Suborder Opisthocoela. Suborder Anomocoela. Suborder Procoela. Suborder Diplasiocoela. State lists. Index.

Note: A summary of the amphibian fauna of Mexico on much the same plan as the same authors' *Annotated checklist and key to the snakes of Mexico*, 1945 (see below) Orders, suborders, families, genera, and species are systematically listed, with keys for identification. For each species are indicated scientific name, brief synonymy location of type specimen, type locality and range.

SMITH HOBART MUIR, AND EDWARD H. TAYLOR

An annotated checklist and key to the snakes of Mexico Washington, D C. Government Printing Office 1945 239 p. 23 cm. (Smithsonian Institution. United States National Museum. Bulletin 187) Paper $0.50 608

Contents: Introduction Methods and definitions. Zoogeographical discussion. Key to the Mexican genera. Family Typhlopidae. Family *Leptotyphlopidae Family Boidae. Family Pythonidae.* Family Colubridae. Family Elapidae. Family Hydrophiidae. Family Crotalidae. Species incertae sedis. State lists. Index.

Note. A checklist of all known genera and species of snakes in Mexico arranged systematically with keys to the Mexican forms of each genus. For each species is given its name reference to the original description of the name used, identification of the type specimen, the type locality and range. The work is based upon field work in Mexico and upon examination of specimens in various collections of Mexican snakes in the United States. A total of 449 forms of snakes belonging to 79 genera are reported.

SMITH HUGH MCCORMICK

The fresh-water fishes of Siam, or Thailand. Washington, D C. Government Printing Office, 1945 622 p. illus. 23 cm. (Smithsonian Institution United States National Museum. Bulletin 188) Paper $1.50 609

Contents: Introduction: Purpose and scope. Sources of information. Ichthyological literature of Thailand. Origin and relationships of the fresh-water fish fauna. Zoogeographic divisions of Thailand and their principal fresh waters. Gazetteer of collecting localities in Thailand Leading features of the fish fauna. Some peculiarities of structure and habits among the fresh water fishes. Introduced species. Vernacular names. Use of fresh-water fishes in contests. Economic importance of the fresh-water fishes. Class Pisces. Subclass Elasmobranchii Order Euselachii. Order Batoidei. Subclass Teleostomi. Order Isospondyli. Order Ostariophysi. Order Apodes. Order Synbranchii. Order Protacanthopterygii. Order Microcyprini. Order Cyprinodontes. Order Synentognathi. Order Heterosomata. Order Labyrinthici. Order Percomorphi. Order Gobioidea. Order Plectognathi. Literature cited. Index.

Note. "The main purpose of this work is to make known, by means of comprehensive and not too technical account, the nature, extent, and richness of the fish fauna inhabiting the fresh waters of the ancient kingdom of Siam; to describe the relationships of the various groups; and to indicate what further collecting of specimens is necessary or likely to prove profitable scientifically The principal basis for the work was the collections and observations made in Siam by the writer in the years 1923–1934 during which he was adviser in fisheries to the Siamese Government, supplemented by collections in museums and examination of literature pertaining to Siamese fishes from 1860 to date. The author had not quite completed the manuscript of this work at the time of his death in 1941 and the final work necessary to put it in shape for editing and publication was carried out by Dr Leonard P Schultz, Curator of Fishes, United States National Museum.

VERTEBRATES BIRDS

ALLEN ARTHUR AUGUSTUS

Ornithology laboratory notebook for recording observations made in the field and studies made in the laboratory on the birds of North America with drawings by L. A. Fuertes M D Pirnie and William Montagna. Fifth edition. Ithaca, N Y Comstock Publishing Company Inc. 1947 256 p illus. 27 cm. $4 00 610

Contents (abridged) Directions. Reference works to consult in completing the life history and identification charts. Plates: Topography of the bird—Feather tracts of the bird—*Parts of the feather* —Skeleton of the bird. Diagrams of feather types. Key to orders of North American birds. Keys to the families of birds found in North America. Identification of bird skins to the order and family Orders of North American birds and their distinctive characteristics. Key to the nests of the commoner summer-resident birds of northeastern North America. Summer and winter ranges of North American birds Life history charts. Plate of egg shapes. Check lists of birds of eastern North America.

Note The intended purpose of this book is its use in organized courses in elementary ornithology such as are offered at Cornell University Approximately half of the space is occupied by outline life history charts for the student to fill in with observations and data on common species. However the book is also useful home study guide for amateur ornithologists. It is well illustrated with both line drawings and reproductions of photographs. In this edition, the scope has been extended to include all North American birds.

BAILEY ALFRED MARSHALL

Birds of Arctic Alaska. Denver The Colorado Museum of Natural History 1948 317 p. illus. 26 cm. (Colorado Museum of Natural History Popular series. Number 8) $4.50 paper $3 00 611

Contents: Introduction. Scope of work. Acknowledgments. The Arctic slope. Vegetation of the Arctic slope of Alaska, by Joseph Evans. Migration along the Arctic coast. Historical sketch. Localities listed in report. Narrative The summer cruise. The northern cruise. Autumn in the Arctic. Winter in the Arctic. Down the coast. Work at Wales. Birds of Arctic Alaska. Bibliography Index.

Note This volume contains report of fifteen months field work in Arctic Alaska and compilation of birds recorded in literature from Cape Prince of Wales north and east along the Arctic slope of Alaska to Demarcation Point. The section on the birds, which comprises somewhat more than half of the volume, does not attempt to describe the species but rather notes distribution of the species in Arctic Alaska, with actual records of time and place of specimens collected. More than 200 species are included. The illustrations are mostly from field photographs by the author

BENT, ARTHUR CLEVELAND

Life histories of North American nut hatches, wrens, thrashers, and their allies. Order Passeriformes. Washington, D C. Government Printing Office 1948 475 p illus. 24 cm. (Smithsonian Institution. United States National Museum. Bulletin 195) Paper $1 75 612

Contents: Introduction Order Passeriformes. Family Sittidae, nuthatches. Family Certhiidae, creepers. Family Chamaeidae, wren-tits. Family Cinclidae, dippers. Family Troglodytidae, wrens Family Mimidae mockingbirds and thrashers Literature cited. Index.

Note The sixteenth in series of bulletins of the United States National Museum on the life histories of North American birds by the same author Full life histories are given of the best-known subspecies of each species, with brief notes on other subspecies. The following points are covered in typical life history (that of the catbird) Habits Spring migration Courtship. Nesting. Eggs. Incubation. Young. Plumages. Food Vegetable food. Animal food. Food of the young Behavior Voice. Enemies. Casualties. Diseases and parasites. Banding and longevity Winter. Distribution Range. Breeding range. Winter range. Migration Casual records. Egg dates. Throughout the work the author gives names of contributors and dates of their observations or contributions. The series is mine of documented information for persons concerned in any way with the life histories of North American birds. The volumes are plentifully illustrated with plates from photographs, some from the camera of the author.

BOND JAMES

Field guide to birds of the West Indies a guide to all the species of birds known from the Greater Antilles Lesser Antilles and Bahama Islands. With colored plate and line drawings by Earl Poole. New York The Macmillan Company 1947 257 p illus. (part col d) 19 cm. $3 75 613

Contents Introduction. Order Colymbiformes. Order Procellariiformes. Order Pelecaniformes. Order Ciconiiformes. Order Anseriformes. Order Falconiformes. Order Galliformes. Order Gruiformes. Order Charadriiformes. Order Columbiformes Order Psittaciformes. Order Cuculiformes. Order Strigiformes. Order Caprimulgiformes. Order Apodiformes. Order Trogoniformes. Order Coraciiformes. Order Piciformes. Order Passeriformes. Index of local names. Index of common names.

Note: A convenient handbook whose chief purpose is to aid in rapid identification in the field. For each species concise information is given on size, appearance, coloring, nesting habits, and occasionally on call or song. Identification is aided by the generous number of black and white illustrations.

BUMP GARDINER, AND OTHERS

The ruffed grouse life history propagation management. By Gardiner Bump Robert W Darrow Frank C Edminster and Walter F Crissey Albany N Y New York State Conservation Department, 1947 897 p. illus. (part col d) 27 cm. $10 00 614

Contents (abridged) Part I, The ruffed grouse—its background, basic biology and economic importance. Part II, The factors that affect abundance Cover characteristics and shelter requirements. Food habits and requirements. Influence of weather Predation. Reproductive capacity of the species. Influence of man. Parasitism and disease. Artificial propagation. Fluctuations in grouse abundance. Part III, Managing the grouse crop Grouse management. Designing grouse coverts and setting up management plans. Improving and maintaining grouse coverts. The maintenance of grouse crop. Coordinating grouse production with other primary land uses. Part IV Appendix The anatomy of the ruffed grouse. The pterylography of the ruffed grouse. Physiological studies of the ruffed grouse. Available insect food for the grouse chicks. Literature cited. Index.

Note The results of sixteen years' intensive investigation—in the field, laboratory and library—are recorded here for the sportsman, wildlife worker biologist, and conservationist interested in the ruffed grouse and its conservation. Every conceivable phase of the subject is discussed thoroughly and in simple language. Supporting the text are 184 tables of carefully analyzed data, 171 figures, and approximately 180 black and white photographs in addition to four plates in full color.

CRUICKSHANK, ALLAN D

Wings in the wilderness. New York Oxford University Press, 1947 illus. 26 cm. $6 00 615

Note A collection of 125 excellent photographs depicting wide variety of North American birds in their natural habitats. The photographs are accompanied by brief notes concerning the characteristics of each bird and the conditions under which the picture was obtained Data regarding the type of camera used, lens, stop, and speed are included in the appendix. It is of interest both to bird lovers and wild-life photographers.

CRUICKSHANK, HELEN GERE

Flight into sunshine, bird experiences in Florida. Photographs by Allan D Cruickshank. New York The Macmillan Company 1948 132 p illus. 26 cm. $5.00 616

Contents Florida, mecca for naturalists. Brown pelicans at Daytona. Louisiana herons at Barnacle. Florida cranes on the Kissimmee prairie. Vultures. Glossy ibises on King's Bar White ibises at Shark River Wood ibises at Cuthbert Lake. Snowy egrets at East River rookery Anhingas at Paradise Key American egrets on Dildo Key Great white herons in Florida Bay

Note An excellent account of adventures in bird observing in Florida. It is intended for amateur naturalists and others who enjoy reading accurately expressed literature about nature. There are 121 reproductions of remarkable photographs most of which show cranes, herons, pelicans, ibises, and other birds native to this region in their natural habitat.

DEIGNAN, HERBERT GIRTON

The birds of northern Thailand. Washington D C. Government Printing Office, 1945 616 p illus. 23 cm. (Smithsonian Institution. United States National Museum. Bulletin 186) Paper $1.25 617

Contents Ornithological exploration of northern Thailand. Geography Mountains. Climate. Breeding seasons. Migration. Faunistics. Vegetation. Annotated list of birds: Order Podicipitiformes. Order Pelecaniformes. Order Ciconiiformes. Order Anseriformes. Order Falconiformes. Order Galliformes. Order Gruiformes. Order Cha-

ucidiformes. Order Psittaciformes. Order Columbiformes. Order Cuculiformes. Order Strigiformes. Order Caprimulgiformes. Order Coraciiformes. Order Trogoniformes. Order Coraciiformes. Order Piciformes. Order Passeriformes. Index.

Note A scientific account of the birds of Chiang Rai province of Siam and of those parts of the provinces of Mae Hong Son, Chiang Mai, Lamphun, Lampang, Phrae and Nan lying north of latitude 17°47'N Under the name of each species are recorded bibliographical references and descriptions of specimens taken by the author and others, with localities and dates of capture.

DELACOUR, JEAN

Birds of Malaysia. With line drawings by Earl L. Poole and Alexander Seidel. New York The Macmillan Company 1947 382 p. illus. 21 cm. (The Pacific world series) $5.00. 618

Contents (abridged) Bird geography in the Malaysian subregion. The birds of Malaysia: Grebes. Shearwaters and petrels. Tropic-birds. Gannets and boobies. Frigate-birds. Cormorants and darters. Herons. Storks. Ibises. Hawks and eagles. Megapodes. Partridges, quails, and pheasants. Cranes. Finfoots. Jacanas. Plovers and lapwings. Curlews, godwits, sandpipers, and tattlers. Pratincoles. Gulls and terns. Pigeons and doves. Parrots. Typical owls. Frogmouths. Nightjars. Swifts. Trogons. Kingfishers. Bee-eaters. Rollers. Hoopoes. Honey-guides. Barbets. Woodpeckers. Broadbills. Pittas. Wagtails and pipits. Shrikes. Wood-swallows. Leafbirds and fairy bluebirds. Bulbuls. Flowerpeckers. Sunbirds. White-eyes. Honey-eaters. Weavers. Drongos. Orioles. Jays, magpies, and crows. Appendix: Generic synonyms. Glossary and abbreviations. Index.

DELACOUR, JEAN, AND ERNST MAYR

Birds of the Philippines. With line drawings by Earl L. Poole and Alexander Seidel. New York The Macmillan Company 1946 309 p. illus. 21 cm. (The Pacific world series) $4.00 619

Contents (abridged) Part I, General section Bird geography in the Philippines. Bird habitats in the Philippines. Part II, Systematic section Grebes. Petrels and shearwaters. Pelicans. Cormorants and darters. Man-o'-war birds. Herons and their relatives. Ducks. Hawks. Pheasants and quails. Rails, gallinules, and coots. Jacanas. Shorebirds and their relatives. Gulls and terns. Pigeons and doves. Parrots. Cuckoos. Owls. Frogmouths. Nightjars. Swifts. Trogons. Bee-eaters. Rollers. Hornbills. Pittas. Larks. Swallows. Wagtails, and pipits. Cuckoo-shrikes. Wood-swallows. Leafbirds and fairy bluebirds. Bulbuls. Old world insect eaters: robins, chats, and thrushes—babblers—warblers—flycatchers—whistlers. Tree-creepers. Flowerpeckers. Sunbirds. White-eyes. Finches. Starlings. Weavers. Drongos. Appendix: The birds of the Palawan group. Generic synonyms. Glossary and abbreviations. Index.

Note: As were all of the volumes in this series, this handbook was originally prepared to afford American soldiers in the Pacific with convenient sources of information about the wild life of the regions where they were stationed. Now it is available to amateur naturalists and other persons in need of reliable but not too technical information about the birds of these regions. It brings together information which was hitherto available only in scattered sources, and they complement recent books on the birds of adjacent regions. The information given about each species includes simple identification keys; short descriptions of size, coloration, and call, geographical distribution; and a few details of habits. Both books are illustrated with a moderate number of well-executed drawings.

EDMINSTER, FRANK CUSTER

The ruffed grouse its life story, ecology and management. New York The Macmillan Company 1947 385 p illus. 24 cm. $1 95 620

Contents: Part I, Its life story: The bird itself. Chronicle of the ruffed grouse in eastern United States. Biography Part II, Ecology of the ruffed grouse: Shelter. Food and water. Weather conditions in relation to grouse. Interrelationships of ruffed grouse to animals and to other birds. The diseases and parasites of wild ruffed grouse. Man's relation to the grouse. Productivity and populations. Part III, Management of the ruffed grouse. Index.

Note: A carefully documented and thorough work on the ruffed grouse (*Bonasa umbellus*) particularly as it is found in the northeastern United States. The book is based partly on the author's findings while participating for seven years in a scientific study undertaken by the Conservation Department of New York State to determine the causes of periodic declinations in the grouse population; but the findings of other researchers are also incorporated. The book reads well, and the text is supplemented by extensive bibliographies and about 180 excellent photographs. It is of interest to ornithologists, sportsmen, and persons engaged in wild-life conservation.

FRIEDMANN HERBERT

The birds of North and Middle America. A descriptive catalog of the higher groups genera, species, and subspecies of birds known to occur in North America, from the Arctic lands to the isthmus of Panama, the West Indies and other islands of the Caribbean Sea, and the Galápagos Archipelago Commenced by the late Robert Ridgway continued by Herbert Friedmann Part x Family Cracidae—the curassows guans, and chachalacas Family Tetraonidae—the grouse, ptarmigan etc. Family Phasianidae—the American quails, partridges and pheasants Family Numididae—the guineafowls Family Meleagrididae—the turkeys. Washington, D C. Government Printing Office, 1946 484 p illus. 23 cm. (Smithsonian Institution United States National Museum. Bulletin 50 part x) Paper $1.25 621

Contents Order Galliformes, fowllike birds: Key to the suborders and superfamilies of Galliformes. Suborder Galli megapodes, curassows, grouse, pheasants. Superfamily Cracoidea: pigeon-toed galli. Superfamily Phasianoidea: grouse, pheasants, turkeys. Index.

Note: (1946) The latest part of a monumental reference work on birds, the first eight parts of which were written by Robert Ridgway and published between 1901 and 1919 The work was resumed by Herbert Friedmann with Part IX in 1941, and at least two more parts after Part x are to be published. The birds are described in systematic order and references to the literature are given under each species. In the preparation of Parts IX and x the author made extensive use of the manuscript notes left by Robert Ridgway although feeling himself responsible for the contents of the new parts and not considering himself as an editor of an unpublished work. In the ten volumes published thus far there have been treated in detail 495 genera and 2716 species and subspecies.

GRISCOM LUDLOW

Modern bird study Cambridge Harvard University Press 1945 190 p illus. 20 cm. $2.50 622

Contents: Development of field ornithology Capacity and intelligence of birds Adaptability of birds. Migration causes and origin. Migration factors and routes. Distribution general. Distribution South America. Distribution Central America Distribution North America. Classification and the species concept Index.

Note: Based on a series of lectures delivered at the Lowell Institute in 1944 this book provides a good insight into the methods and some of the fields of interest of present-day ornithology It is addressed to laymen particularly the growing army of bird watchers who have a scientific interest in the hobby and one of its objects is to show how these amateurs can assist professional ornithologists in the solving of many problems. Accounts of some of the author's personal observations and experiences with birds are included.

HAUSMAN LEON AUGUSTUS

Birds of prey of northeastern North America. Illustrated in pen and ink by Jacob Bates Abbot. Frontispiece by George Miksch Sutton. New Brunswick, N J Rutgers University Press 1948 164 p illus. (part col'd) 26 cm. $3 75 623

Contents: A word to the reader. List of illustrations. Introduction. The American vultures. The American hawks, eagles, and their kin. The owls. Classification of the birds of prey of northeastern North America. Bibliography. Index.

Note. The so-called birds of prey are dealt with sympathetically in this book as necessary factors in maintaining biologic balance in nature. Approximately thirty-five species are described as to distinguishing features, body and wing dimensions, habitat, nesting and feeding habits, and geographic range. Thirty excellent drawings depict the birds described. The book is intended for general readers, sportsmen, and amateur ornithologists.

HAUSMAN LEON AUGUSTUS

Field book of eastern birds. With six plates containing ninety four birds and bird heads in full color and over four hundred drawings by Jacob Bates Abbott. New York G P Putnam's Sons 1946 659 p illus. 18 cm. $3 95 624

Contents. A letter to the reader. Field key to the bird families. Key to the birds seen about the home grounds. Loons. Grebes. Shearwaters and fulmar. Storm petrels. Tropic-birds. Pelicans. Gannets and boobies. Cormorants. Darters. Man-o'-war birds. Herons, bitterns, and egrets. Storks and wood-ibises. Ibises and spoonbills. Flamingos. Swans, geese, ducks, and ducklike birds. Birds of prey. Vultures. Kites, hawks, and eagles. Caracaras and falcons. Grouse and ptarmigans. Quails and partridges. Pheasants. Turkeys. Cranes. Limpkins. Rails, gallinules, and coots. Oyster-catchers. Plovers and turnstones. Woodcock, snipes, sandpipers, etc. Avocets and stilts. Phalaropes. Jaegers and skuas. Gulls and terns. Skimmers. Auks, murres, and puffins. Pigeons and doves. Cuckoos. Owls. Goatsuckers. Swifts. Humming birds. Kingfishers. Woodpeckers. Flycatchers. Larks. Swallows. Crows, jays, and ravens. Titmice. Nuthatches. Creepers. Wrens. Mimics. Thrushes, robins, and bluebirds. Kinglets and gnatcatchers. Pipits. Waxwings. Shrikes. Starlings. Vireos. Wood warblers. Weaver finches. Blackbirds. Tanagers. Finches. Bibliography. Index.

Note. A popular guide to the birds of North America east of the Mississippi River and Hudson Bay. For each bird the following is given concisely: common name, scientific name, length, picture, other names, field marks, field description, characteristic habits, notes, habitat, range. Throughout the text are field keys to the different groups and families to assist in the differentiation of like species.

MCATEE, WALDO LEE editor

The ring necked pheasant and its management in North America. Washington, D C. The American Wildlife Institute, 1945 320 p illus 23 cm. $3.50 625

Contents. Foreword, by W. L. McAtee. Historical introduction, by F. C. Walcott. Classification and distribution of the genus, or true pheasants, by J. Delacour. The pheasant in Pennsylvania and New Jersey, by L. J. Bennett. The pheasant in the Northeast, by J. Pearce. The pheasants in Ohio, by D. L. Leedy and L. E. Hicks. The pheasant in Michigan, by H. M. Wight. Food habits of adult pheasants, by F. D. Dalke. Breeding habits of the pheasants, by Professor Wight. Pheasant mortality, by P. F. English. Agricultural practices in relation to the pheasant, by Professor Wight. The pheasant in the northern Prairie states, by P. L. Errington. The pheasant in the sandhill region of Nebraska, by W. M. Sharp and H. Elliott McClure. The pheasant in the intermountain irrigated region, by D. I. Rasmussen and W. T. McKean. The pheasant in the Pacific Northwest, by A. S. Einarsen. Pheasant propagation, by W. W. Bailey and E. B. Nestler. Literature cited. Index.

Note. Most of the papers in this volume are written from the viewpoint of sportsmen interested in conservation and planned wildlife management. They deal with such topics as the factors that affect the size of the pheasant population, management from the viewpoint of conservation, stocking, and hunting in the geographical area under discussion. The final paper is an excellent presentation of hatchery and game farm practices.

MAYR ERNST

Birds of the southwest Pacific a field guide to the birds of the area between Samoa, New Caledonia and Micronesia. With colored plates by Francis [illegible] es and line drawings by Alexander Seidel. New York The Macmillan Company 1945 316 p illus. (part col d) 19 cm. $4 00 626

Contents. Part I, General section. The seabirds of the southwest Pacific. The shorebirds of the southwest Pacific. The land and fresh-water birds of the southwest Pacific. Part II, Geographical section. The land and fresh-water birds of Samoa. The land and fresh-water birds of Fiji, Tonga, and neighboring islands. The land and fresh-water birds of New Caledonia and Loyalty Islands. The land and fresh-water birds of the New Hebrides and Banks Islands. The land and fresh-water birds of the Santa Cruz Islands. The land and fresh-water birds of the Solomon Islands. The land and fresh-water birds of Micronesia. Glossary. Index.

Note. A practical handbook for students, amateur ornithologists, and lay visitors to these regions. It is designed to aid in identification in the field. Besides the rather full descriptions of identification marks, there are very short descriptions of habits and range. Every species known to occur within this area is described, totalling 348 species together with 415 subspecies.

NEFF JOHNSON ANDREW

Habits food and economic status of the band-tailed pigeon Washington, D C. Government Printing Office 1947 76 p illus. 23 cm. (United States Fish and Wildlife Service. North American fauna 58) Paper $0.20 627

Contents. Introduction. History of knowledge of the species. Natural history. Description. Size. Plumages. Courtship. Calls. Behavior. Nesting. Growth of the young. Natural enemies and diseases. Distribution. General range. Summer range. Winter range. Migration. Value as game bird. Present status. Management possibilities. Agricultural relationships. Depredations. Methods of crop protection. Food habits: General. Use of mineral salts. Results of laboratory examinations. Seasonal food preferences. Use of gravel. Influence of age or sex. Feeding mannerisms. Quantity of food taken. Summary. Bibliography.

Note. The information provided in this pamphlet is for use in conserving and managing the band-tailed pigeon of the West, the largest native member of the family Columbidae in the United States. A detailed account is given of the species (*Columba fasciata fasciata*), its natural history and distribution. Original information is presented on food habits, based on the laboratory analyses of 491 stomachs and/or crops of these birds.

PETERS JAMES LEE

Check list of birds of the world. Vol. v Cambridge, Mass. Harvard University Press, 1945 306 p. 23 cm. $5 00 628

Contents (abridged). Order Apodiformes: Suborder Trochili—Family Trochilidae. Order Coliiformes: Family Coliidae. Order Trogoniformes: Family Trogonidae. Order Coraciiformes—suborder Alcedines. Superfamily Alcedinoidea—Family Alcedinidae. Superfamily Todoidea—Family Todidae. Superfamily Momotoidea—Family Momotidae. Suborder Meropes—Family Meropidae. Suborder Coracii—Family Leptosomatidae. Family Coraciidae. Family Upupidae. Family Phoeniculidae. Suborder Bucerotes. Family Bucerotidae. Index. New names proposed in volume.

—— Check list of birds of the world. Vol. vi. Cambridge Mass Harvard University Press 1948 259 p 23 cm. $6 50 629

Contents (abridged). Order Piciformes. Suborder Galbulae. Superfamily Galbuloidea. Family Galbulidae, jacamars. Family Bucconidae, puff birds. Superfamily Capitonoidea. Family Capitonidae, barbets. Family Indicatoridae, honey-guides. Superfamily Ramphastoidea. Suborder Pici. Family Picidae. Subfamily Jynginae, wrynecks. Subfamily Picumninae, piculets. Subfamily Picinae, woodpeckers. Index. New names proposed in volume vi.

Note. (1637) A basic reference book for systematic ornithologists. Essentially it supersedes Richard Bowdler Sharpe's *Handlist of the genera and species of birds*. London, 1899. The information supplied covers the following points: verified references to the original publication of all scientific names; the exact indication of all the type localities and, in the case of genera, of the type species; synonyms published since 1900; geographic range; references to the more recent literature pertaining to each genus. Physical descriptions of the birds are not included.

PETERSON ROGER TORY

A field guide to the birds, giving field marks of all species found east of the Rockies. Second revised and enlarged edition. Sponsored by National Audubon Society Boston Houghton Mifflin Company 1947 290 p illus. (part col d) 19 cm. $3.50 630

Contents (abridged) How to use this book. Loons—Gaviidae. Grebes—Colymbidae. Shearwaters and fulmars. Storm petrels. Tropic-birds. Pelicans. Gannets and boobies. Cormorants. Darters. Man-o'-war-birds. Herons and bitterns. Storks and wood ibises. Ibises and spoonbills. Flamingos. Swans. Geese. Tree-ducks. Surface-feeding ducks. Vultures. The means of hawks. Kites. Buteos, or buzzard hawks. Eagles. Ospreys. Falcons. Grouse. Quails, partridges, and pheasants. Turkeys. Cranes. Limpkins. Rails, gallinules, and coots. Oyster-catchers. Plovers and turnstones. Woodcock, snipe, sandpipers. Avocets and stilts. Jaegers. Gulls. Terns. Skimmers. Auks, murres, and puffins. Pigeons and doves. Owls. Goatsuckers. Swifts. Hummingbirds. Kingfishers. Woodpeckers. Flycatchers. Larks. Swallows. Crows and jays. Titmice. Nuthatches. Wrens. Mockingbirds and thrashers. Thrushes, robins, bluebirds, etc. Gnatcatchers and kinglets. Pipits. Waxwings. Shrikes. Starlings. Vireos. Wood warblers. Weaver finches. Meadowlarks, blackbirds, and orioles. Tanagers. Grosbeaks, finches, sparrows, and buntings. Accidentals. Subspecies. Home reference suggestions. Index.

Note (1947) The sight identification of birds under field conditions is the subject of this useful guide for bird-watchers, amateur naturalists, and ornithologists. One thousand illustrations, of which 500 are in full color provide pattern details, silhouettes, and prominent markings, while accompanying pages of text explain the plates and give information such as range habitat, and manner of flight. In this edition, all of the illustrations are new sections have been added on similar species, and there are few other changes.

PETTINGILL, OLIN SEWALL JR.

A laboratory and field manual of ornithology Illustrated by Walter J Breckenridge. Minneapolis, Minn. Burgess Publishing Company 1946 248 p illus. 28 cm. Spiral bound. $3.50 631

Contents. Preface. Topography Feathers and feather tracts. Internal anatomy Classification and nomenclature. External structural characters. Laboratory identification. Plumages and plumage coloration. Distribution and migration. Field identification. Bird ecology Bird communities. Bird territory Mating. Nests and nest building. Eggs, egg-laying, and incubation. Young and their development. Parental care. Bird populations. Appendices: Ornithological field methods. Preparation of paper Bibliographies pertaining more or less to ornithology Bibliography of life history studies Selected bibliography of state works on birds. Books for general information and recreational reading. Current North American ornithological journals.

Note Designed primarily for use in ornithological study and research at the college and university level, this laboratory and field manual of ornithology presupposes college course in general zoology or biology Each of its sections includes an outline of basic information, directions for making detailed observational studies, and bibliographical references for further inquiries on specific topic. Preliminary mimeographed editions (this work appeared in 1939 and 1941) the present edition in photo offset, includes revised sections of the earlier editions, as well as entirely new sections and new illustrations.

POUGH RICHARD HOOPER

Audubon bird guide eastern land birds. With illustrations in color of every species by Don Eckelberry Sponsored by National Audubon Society Garden City N Y Doubleday & Company Inc. 1946 312 p illus. (part col d) 19 cm. $3.00 632

Contents: Parrot family Cuckoo family Barn owl family Typical owl family Goatsucker family Swift family Hummingbird family Kingfisher family Woodpecker family Cotinga family Tyrant flycatcher family Lark family Swallow family Jay family Tit family Nuthatch family Creeper family Wren family Thrasher family Thrush family Old world warbler family Pipit family Waxwing family Shrike family Starling family Vireo family Honey creeper family Wood warbler family Weaver finch family Blackbird family Tanager family Sparrow family Index.

Note: A field book of the land birds found in the eastern portion of the North American continent. It is addressed primarily to amateur naturalists. A foreword gives general facts about birds and their habits and contains advice on observing them. The species descriptions average one page in length and cover these points: common and scientific names, identification (length, shape, plumage, other distinctive features, sex differences, etc.) habits, voice, nest and eggs, and range. The colored illustrations are special feature. The book concludes with selected bibliography

STORER, JOHN H

The flight of birds analyzed through slow motion photography Bloomfield Hills, Mich. Cranbrook Institute of Science 1948 94 p. illus. 24 cm. (Cranbrook Institute of Science. Bulletin no 28) $2.50 633

Contents (abridged) The bird and the air Developing lift. Pressure distribution. Tip vortex. Aspect ratio. Factors that affect lift and drag. Slots and their purposes. Flaps to increase lift. The bird's flying equipment. Feathers. The wing. The propeller. Wing adaptations. Flight. Balance and control. Devices for the take-off. Landing. Soaring and gliding. Air currents. Formation flying. Flight speed. Maneuverability Backward flight. Glossary References. Index.

Note. The author became interested in the mechanism of bird flight when he observed that motion pictures taken with slow motion camera showed birds' wings in positions that were not visible when flight was observed with the unaided eye. He studied many such pictures and also consulted experts in both ornithology and aeronautics. This book is non-technical summary of his findings. The section on flight presents detailed studies of aspects of the flight of various birds and accounts for about half of the book's length. Analogies to the airplane are drawn. There are 176 illustrations, most of which are reproduced from motion picture films.

VERTEBRATES MAMMALS (EXCEPT MAN)

ASDELL SYDNEY ARTHUR

Patterns of mammalian reproduction. Ithaca, N Y Comstock Publishing Co , Inc., 1946 437 p. illus. 24 cm. $5 00 634

Contents: Part I, The scaffolding: Introduction. Sex determination and differentiation. Puberty and sexual maturity The hormones concerned in reproduction. The estrous cycle. Pregnancy Factors influencing the life of spermatozoa. The male accessory organs. Part II, The fabric: Monotremata. Marsupialia. Insectivora. Chiroptera. Primates. Carnivora. Pinnipedia. Cetacea. Nomarthra. Xenarthra. Tubulidentata. Lagomorpha. Rodentia. Hyracoidea. Proboscidea. Sirenia. Artiodactyla. Perissodactyla. Index of Latin names. Index of vernacular names. General index.

Note A reference book on selected aspects of the reproductive physiology and behavior of mammals. Quantitative aspects such as age at puberty frequency of estrus, length of gestation period, and number of young in the litter are emphasized, but there is also considerable information on histology and physiology and relatively less on behavior Part contains concise, generalized summary of the knowledge of mammalian reproduction Part II presents species by species the particular knowledge that has been reported in the literature and gives references to the original publications.

BURT WILLIAM HENRY

The mammals of Michigan. Illustrated by Richard Philip Grossenheider Ann Arbor Mich. The University of Michigan Press, 1946 288 p illus. (part col d) 26 cm. $4.00 635

Contents (abridged) Earlier accounts. Faunal position of Michigan. Economic importance of mammals. Adaptive radiation (divergence) Home ranges and territories. Populations. Collecting and preparing specimens. Artificial key to Michigan mammals. Classification of the mammals of the world. The mammals of Michigan. Appendix: Table summarizing measurements (in mm.) and life history data. Index.

Note The author staff member of the Museum of Zoology of the University of Michigan, bases the statements in this book as far as possible upon materials (specimens and field notes) in the

Museum. The pen drawings and colored plates which illustrate the volume are mostly from life. The purpose of the volume is two-fold: first, to summarize present knowledge of the mammals of Michigan and to make it available for use; secondly to point out areas needing further investigation in order to encourage research in the field. For each species there is a description covering size, physical characteristics, habitat, habits, distribution, and economic status, and also an illustration of the species and a distribution map, showing (1) distribution in Michigan and (2) distribution in North America; bibliographical references also are grouped with the species descriptions. A slightly revised edition was published in 1948.

CAHALANE, VICTOR HARRISON

Mammals of North America. With drawings by Francis L. Jaques. New York The Macmillan Company, 1947 682 p illus. 24 cm. $7.50 636

Contents (abridged) The wild pig. The deer family—elk—white-tail deer—moose—caribou. The [illegible]—antelope. Original American livestock—buffalo—muskox—bighorn—mountain goat. Survivors of ancient orders—opossum—armadillo. The insect hunters—mole—shrew. The flyer—bat. The bears. The bear's small cousins—raccoon—coati—cacomistle. The weasel-carriers—marten—fisher—weasel—mink—wolverine—the otter—striped skunk—hog-nosed skunk—spotted skunk—badger. The wild dogs—red fox—gray fox—coyote—wolf. The cats—the cougar—jaguar—ocelot—lynx. The finfeet—fur seal—sea lion—sea elephant—walrus. The 'chucks and ground squirrels. The chipmunks and squirrels. Chisel-teeth (Part I)—pocket gopher—kangaroo rat—beaver—harvest mouse—cotton rat. Chisel-teeth (Part II)—lemming—meadow mouse—muskrat—house rat—mountain beaver—porcupine. The hares and rabbits. The vanishing mermaid—the manatee. Two seafarers—the whale—dolphin. List of references. Index.

Note A popular book which is outstanding for its scope and readability. The land mammals, both large and small, are described rather completely but the sea mammals and the bats are given relatively less space because they are not readily accessible to the layman for observation. The descriptive matter deals largely with range, physical characteristics, life histories, and habits. The author is Chief Biologist of the United States National Park Service.

CARTER, THOMAS DONALD AND OTHERS

Mammals of the Pacific world, T D Carter J E Hill, and G H H Tate. New York The Macmillan Company 1945 227 p illus. 21 cm. (American Committee for International Wild Life Protection. The Pacific world series, Fairfield Osborn, chairman) $3.50 637

Contents (abridged) Characteristics and classifications of mammals. Species of mammals of the Pacific area. Distribution of mammals in the Pacific area. Conservation of mammals. Glossary. Alphabetical index-checklist of the islands.

Note An introductory handbook on the mammals of the Pacific islands from the Aleutians to Japan, Sumatra, New Guinea, and Hawaii, which briefly describes and gives facts on the origin, life history and distribution of a selected number of the commonly found mammals, grouped according to species. It is intended as reference or field book for laymen. The section on the distribution of the animals among the islands includes a discussion of the changes in climate and topography as well as evolution of the animals. There is an alphabetical checklist of the principal islands indicating the species to be found on each. A glossary is included but no index. The authors are associated with the American Museum of Natural History

EINARSEN ARTHUR SKOGMAN

The pronghorn antelope and its management. Washington, D C The Wildlife Management Institute 1948 238 p illus (part col d) 23 cm. $4.00 638

Contents History distribution, and abundance. Characteristics and life history. Physical characteristics. behavior. food habits. disease and mortality; life history. Pronghorn antelope in relation to civilization. Management of the antelope resource. How to hunt antelope. Epilogue. Appendix. Acknowledgments. A short sketch of the 1945 restricted pronghorn season in Oregon. Systematic descriptions. Literature cited. Index.

Note: Based upon field studies in the four states of Oregon, Idaho, Nevada, and California at all seasons of the year this volume is a scientific account of the pronghorn, a member of the family *Antilocapridae*, of which it is the sole living representative. All phases of the life and ecology of the animal are described. Researches leading to the publication were carried on over a period of about 13 years under the direction of the Oregon Cooperative Wildlife Research Unit, formed at Oregon State College by several national and state agencies. Among the illustrations are 70 reproductions of photographs of the pronghorn and its habitat.

GOODWIN, GEORGE G

Mammals of Costa Rica. Dedicated to Cecil F Underwood. New York American Museum of Natural History 1946 473 p. illus. 27 cm. (American Museum of Natural History Bulletin Vol. 87 article 5) $2.50 639

Contents (abridged) Class Mammalia, Subclass Eutheria Order Marsupialia—Family Didelphiidae. Order Insectivora—Family Soricidae. Order Chiroptera—Family Emballonuridae—Family Noctilionidae—Family Phyllostomidae—Subfamily Chilonycterinae—Subfamily Phyllostominae—Subfamily Glossophaginae—Subfamily Stenoderminae—Family Desmodontidae—Family Vespertilionidae—Family Molossidae. Order Primates—Suborder Anthropoidea—Family Cebidae—Subfamily Atelinae. Family Alouattidae—Family Sciuridae. Order Edentata—Suborder Xenarthra—Family Dasypodidae—Family Bradypodidae—Family Myrmecophagidae. Order Lagomorpha—Family Leporidae. Order Rodentia—Family Sciuridae—Family Heteromyidae—Family Cricetidae—Subfamily Cricetinae—Family Muridae—Subfamily Murinae—Family Coendidae—Family Echimyidae. Order Carnivora—Family Procyonidae—Family Mustelidae—Subfamily Mustelinae—Subfamily Mephitinae—Family Canidae—Family Felidae. Order Pinnipedia—Family Phocidae. Order Sirenia—Family Trichechidae. Order Artiodactyla—Family Tayassuidae—Family Cervidae—Subfamily Cervinae. Order Perissodactyla—Family Tapiridae. Bibliography Index.

Note: A comprehensive description for professional zoologists of all species known to occur in Costa Rica and in adjacent regions of Nicaragua and Panama. The information on each species covers the following points: location and history of the type specimen, geographic range, general characters, description, measurements, and a brief summary of what is known about the animal's habits. The work is based chiefly on an examination of collections made by Cecil F Underwood which are now located in the American Museum of Natural History and other North American museums.

HALL EUGENE RAYMOND

Mammals of Nevada. Contribution from the Museum of Vertebrate Zoology University of California, Berkeley Berkeley and Los Angeles University of California Press, 1946 710 p. illus. (part col d) 24 cm. $7.50 640

Contents Aims. Methods. Plan of treatment. Topography. Climate. Floral belts. Life-zones. Occurrence of mammals in Nevada. Faunal areas. Factors responsible for geographic distribution and speciation. Clines. Speciation. Desert character of mammalian fauna. Check list of mammals. Key to species of Nevadan mammals. Accounts of species and subspecies. Hypothetical list of mammals. Type localities. Names changed since book was written. Gazetteer. Glossary. Literature cited. Index.

Note The major portion of this volume is an account, species by species, of the mammals found in Nevada by the author and his many co-workers in expeditions from the University of California Museum of Vertebrate Zoology between 1909 and 1941. Maps of distribution, tables of measurements of specimens, cranial diagrams, records of occurrence, and other remarks accompany the accounts of the species and subspecies. Mammals are abundant in Nevada, especially small mammals. The aims in preparing this account of them are set forth in detail as follows: to find out what species of mammals occur in Nevada; to ascertain the geographic range of each and the kinds of places in which it lives; to ascertain and then catalogue the geographic variation in each species; to provide such information on habits as would be incidentally obtained in pursuit of the previous aims; to appraise the economic relation to man of the badger, coyote, pocket gopher and beaver; to provide a key with descriptions and illustrations, by means of which a person without special zoological knowledge can identify kinds of mammals.

HARPER, FRANCIS

Extinct and vanishing mammals of the Old World. Illustrations by Earl L. Poole. New York American Committee for International Wild Life Protection 1945 850 p. illus. 23 cm. (American Committee for International Wild Life Protection. Special publication no 12) Paper, $4.00 cloth, $5 00 641

Contents (abridged) Introduction. Accounts of extinct, vanishing, or threatened mammals: Order Marsupialia. Order Insectivora. Order Primates. Order Edentata. Order Rodentia. Order Carnivora. Order Proboscidea. Order Perissodactyla. Order Artiodactyla. Bibliography Index.

Note. (1712b) A companion volume to G. M. Allen, *Extinct and vanishing mammals of the western hemisphere*, New York, 1942. It is descriptive catalogue of mammals which have been recently exterminated or seriously depleted. For most of the species the following information is given the common name the Latin name, reference to the original description with type locality important synonyms, references to illustrations of the exterior or the skull or the bones, current description, range, present status, commercial use if any protective measures if any The first part of each description is couched in the terminology of professional zoology but the latter and larger part is written in semi-technical language and is intended for the information of general readers and persons interested in the conservation of wild life. The bibliography includes books and articles, and although not annotated runs to more than 71 pages.

INGLES LLOYD GLENN

Mammals of California. Stanford University Calif Stanford University Press 1947 258 p. illus. 26 cm. $4 00 642

Contents. Introduction to mammals. How to study mammals. Accounts of the species: Marsupialia. Insectivora. Chiroptera. Carnivora. Pinnipedia. Rodentia. Lagomorpha. Artiodactyla. Cetacea. Appendices Classification of the mammals of California. How to collect and make up study skins. Index.

Note: Directed toward the serious amateur or the beginning student of California mammalogy this volume is successful combination of the popular identification book and the more scholarly classification outline. The practical introductory chapter includes an ingenious "key to the species, to be used with the various members of the nine orders following. General characteristics of orders and families are given, each followed by more detailed information on species (some seventy-five in all) with particulars on appearance, habits, and economic relevance. For most of the species maps of range or location are included, and there are numerous drawings of typical foot tracks and some forty excellent photographic plates.

SANBORN COLIN CAMPBELL

Catalogue of type specimens of mammals in Chicago Natural History Museum. Chicago Chicago Natural History Museum, 1947 293 p illus 24 cm. (Fieldiana zoology Vol. 32 no 4) Paper $1.00 643

Note. A catalogue of types, cotypes, and lectotypes of specimens of mammals known to be in the Chicago Natural History Museum on July 1, 1947 The author, curator of mammals in the Museum, has used Simpson's classification for orders and families, while placing the genera, species, and subspecies in alphabetical order. The data comprise museum number, parts of specimen collected, sex, age, place of origin, *date of collection, and name of collector* along with description of the condition of each specimen. The listing also contains information as to here the specimen has been described. In an additional list the same type specimens are arranged by locality An index serves to facilitate the use of the catalogue.

SIMPSON GEORGE GAYLORD

The principles of classification and a classification of mammals New York The American Museum of Natural History, 1945 350 p. 27 cm. (American Museum of Natural History Bulletin. Vol. 85) $3.50 644

Contents (abridged) Part 1 The principles of taxonomy: Phylogeny Classification. Nomenclature. Part 2 Formal classification of Mammalia. Explanation of the detailed classification. Detailed classification. Part 3 Review of mammalian classification. Bibliography Index to technical names. Index to vernacular names.

Note An important work which contains, as the title indicates, both discussion of the principles of mammalian classification and systematic classification. The classification itself occupies more than one-third of the volume and contains all of the supergeneric groups, all well-defined genera, and many doubtful but probably valid genera. However the author has omitted names which he believes to be invalid. In addition to the systematic arrangement of groups, there is much supplementary information which includes designation of the hierarchic category the preferable technical name for each group, author f the name, bibliographical citation, geological or geographic range, synonyms, and vernacular names for some of the genera. There are many learned notes on inconsistencies and conflicts in the earlier literature. The third part of the work is made up of discussions of special points and problems in the classification of various groups.

TATE GEORGE HENRY HAMILTON

Mammals of eastern Asia. New York The Macmillan Company 1947 366 p illus 21 cm. (The Pacific world series) $4 00 645

Contents (abridged) What is mammal? The home territories of eastern Asiatic mammals. Descriptions of east Asiatic mammals. Glossary Index of common names. Index of scientific names.

Note. A handbook for the interested observer rather than the scientist. It describes mammals found on the mainland of eastern Asia from northeastern Siberia through Manchuria, China, Burma, and Indo-China to the Malay Peninsula, and including Japan and Formosa. In these regions made up as they are of deserts, forests, mountains, and plains, and extremes of temperature, there is great diversity of animal life ranging from shrews, bats, hares, gibbons to pandas, gazelles, wild cattle, elephants, and dolphins. Information given on each species includes size and general appearance, habitat, relationship with other animals, life histories, and outstanding behavior characteristics.

COMPARATIVE ANATOMY AND EMBRYOLOGY

BONIN GERHARDT VON

The cortex of Galago its relation to the pattern of the primate cortex. With 22 figures. Urbana, Ill. The University of Illinois Press 1945 55 p. illus. 27 cm. (Illinois monographs in the medical sciences Vol. v no 3) Paper $1.50 646

Contents (abridged) Part I, Introduction. The problem of morphology The pattern of the primate cortex. The theory of similitude. Part II, Description of the cortex f Galago Material and technique. Biological notes. Gross anatomy Cytoarchitecture of the cortical areas. Part III, Comparisons; Peculiarities of Galago. On cortical structure and function. Part IV Concluding remarks and summary References

Note A systematic study of concrete morphological problem: whether the pattern of the cortex of the primate brain is similar from the lowest to the highest forms. A lower *Galago demidovii*, with brain weight of about 3 grams, was selected for the study; and most of the text of the monograph is concerned with description of the gross anatomy and cytoarchitecture of its brain. Related facts reported previously in the literature are worked into this description then key is provided to all the pertinent literature. The text proper is supplemented by about twenty-five reproductions of line drawings and microphotographs The work also contains discussions bearing on the aim and method of comparative morphology the concept of morphological "pattern, and the theory of similitude as applied to comparative physiology

BONIN GERHARDT VON AND PERCIVAL BAILEY

The neocortex of Macaca mulatta. Urbana, Ill. The University of Illinois Press, 1947 163 p. illus (part col d) 27 cm. (Illinois monographs in the medical sciences. Vol. v no 4) Paper $3 00 647

Museum. The pen drawings and colored plates which illustrate the volume are mostly from life. The purpose of the volume is twofold: first, to summarize present knowledge of the mammals of Michigan and to make it available for use; secondly, to point out areas needing further investigation in order to encourage research in the field. For each species there is a description covering size, physical characteristics, habitat, habits, distribution, and economic status, and also an illustration of the species and a distribution map, showing (1) distribution in Michigan and (2) distribution in North America. Bibliographical references also are grouped with the species descriptions. A slightly revised edition was published in 1948.

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CARTER, THOMAS DONALD AND OTHERS

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EINARSEN ARTHUR SKOGMAN

The pronghorn antelope and its management. Washington D C The Wildlife Management Institute, 1948 238 p illus. (part col'd) 23 cm. $4 00 638

Contents History distribution, and abundance. Characteristics and life history. Physical characteristics; behavior food habits; disease and mortality life history. Pronghorn antelope in relation to civilization. Management of the antelope resource. How to hunt antelope. Epilogue. Appendix. Acknowledgments. A short sketch of the 1945 restricted pronghorn season in Oregon. Systematic descriptions. Literature cited. Index.

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GOODWIN, GEORGE G

Mammals of Costa Rica. Dedicated to Cecil F Underwood. New York American Museum of Natural History 1946 473 p. illus. 27 cm. (American Museum of Natural History Bulletin Vol. 87, article 5) $2.50. 639

Contents (abridged) Class Mammalia, Subclass Eutheria: Order Marsupialia—Family Didelphiidae. Order Insectivora—Family Soricidae. Order Chiroptera—Family Emballonuridae—Family Noctilionidae—Family Phyllostomidae—Subfamily Chilonycterinae—Subfamily Phyllostominae—Subfamily Glossophaginae—Subfamily Stenodermatinae—Family Desmodontidae—Family Vespertilionidae—Family Molossidae. Order Primates—Suborder Anthropoidea—Family Cebidae—Subfamily Atelinae. Family Alouattidae—Family Saimiridae. Order Edentata—Suborder Xenarthra—Family Dasypodidae—Family Bradypodidae—Family Myrmecophagidae. Order Lagomorpha—Family Leporidae. Order Rodentia—Family Sciuridae—Family Heteromyidae—Family Cricetidae—Subfamily Cricetinae—Family Muridae—Subfamily Murinae—Family Caviidae—Family Erethizontidae. Order Carnivora—Family Procyonidae—Family Mustelidae—Subfamily Mustelinae—Subfamily Mephitinae—Family Canidae—Family Felidae. Order Pinnipedia—Family Phocidae. Order Sirenia—Family Trichechidae. Order Artiodactyla—Family Tayassuidae—Family Cervidae—Subfamily Cervinae. Order Perissodactyla—Family Tapiridae. Bibliography Index.

Note: A comprehensive description for professional zoologists of all species known to occur in Costa Rica and in adjacent regions of Nicaragua and Panama. The information on each species covers the following points location and history of the type specimen, geographic range, general characters, description, measurements, and a brief summary of what is known about the animal's habits. The work is based chiefly on an examination of collections made by Cecil F Underwood which are now located in the American Museum of Natural History and other North American museums.

HALL, EUGENE RAYMOND

Mammals of Nevada. Contribution from the Museum of Vertebrate Zoology University of California, Berkeley Berkeley and Los Angeles University of California Press, 1946 710 p illus. (part col'd) 24 cm. $7.50. 640

Contents Aims. Methods. Plan of treatment. Topography Climate. Floral belts. Life-zones. Occurrence of mammals in Nevada. Faunal areas. Factors responsible for geographic distribution and speciation. Clines. Speciation. Desert character of mammalian fauna. Check list of mammals. Key to species of Nevada mammals. Accounts of species and subspecies. Hypothetical list of mammals. Type localities. Names changed since book was written. Gazetteer Glossary Literature cited. Index.

Note The major portion of this volume is an account, species by species, of the mammals found in Nevada by the author and his many co-workers in expeditions from the University of California Museum of Vertebrate Zoology between 1909 and 1941. Maps of distribution, tables of measurements of specimens, cranial diagrams, records of occurrence, and other remarks accompany the accounts of the species and subspecies. Mammals are abundant in Nevada, especially small mammals. The aims in preparing this account of them are set forth in detail as follows: to find out what species of mammals occur in Nevada, to ascertain the geographic range of each and the kinds of places in which it lives; to ascertain the geographic variation in each species and then catalogue the geographic variation in each species; to provide such information on habits as would be incidentally obtained in pursuit of the previous aims; to appraise the economic relation to man of the badger coyote, pocket gopher and beaver; to provide a key with descriptions and illustrations, by means of which a person without special zoological knowledge can identify kinds of mammals.

HARPER FRANCIS

Extinct and vanishing mammals of the Old World. Illustrations by Earl L. Poole New York American Committee for International Wild Life Protection 1945 850 p illus 23 cm. (American Committee for International Wild Life Protection. Special publication no 12) Paper $4.00 cloth, $5.00 641

Contents (abridged) Introduction. Accounts of extinct, vanishing, or threatened mammals. Order Marsupialia. Order Insectivora. Order Primates. Order Edentata. Order Rodentia. Order Carnivora. Order Proboscidea. Order Perissodactyla. Order Artiodactyla. Bibliography Index.

Note: (1712b) A companion volume to G. M. Allen, *Extinct and vanishing mammals of the western hemisphere*, New York, 1942. It is descriptive catalogue of mammals which have been recently exterminated or seriously depleted. For most of the species the following information is given the common name, the Latin name reference to the original description with type locality, important synonyms, references to illustrations of the exterior or the skull or the bones, current description, range, present status, commercial use if any protective measures if any The first part of each description is couched in the terminology of professional zoology but the latter and larger part is written in semi-technical language and is intended for the information of general readers and persons interested in the conservation of wild life. The bibliography includes books and articles, and although not annotated runs to more than 75 pages.

INGLES LLOYD GLENN

Mammals of California. Stanford University Calif Stanford University Press, 1947 258 p. illus. 26 cm. $4.00 642

Contents. Introduction to mammals. How to study mammals. Accounts of the species Marsupialia. Insectivora. Chiroptera. Carnivora. Pinnipedia. Rodentia. Lagomorpha. Artiodactyla. Cetacea. Appendices: Classification of the mammals of California. How to collect and make up study skins. Index.

Note. Directed toward the serious amateur or the beginning student of California mammalogy this volume is successful combination of the popular identification book and the more scholarly classification outline. The practical introductory chapter includes an ingenious "key to the species, to be used with the various numbers of the nine orders following. General characteristics of orders and families are given, each followed by more detailed information on species (some seventy-five in all) with particulars on appearance, habits, and economic relevance. For most of the species maps of range or location are included, and there are numerous drawings of typical foot tracks and some forty excellent photographic plates.

SANBORN, COLIN CAMPBELL

Catalogue of type specimens of mammals in Chicago Natural History Museum. Chicago Chicago Natural History Museum, 1947 293 p illus. 24 cm. (Fieldiana zoology Vol. 32 no 4) Paper $1.00 643

Note A catalogue of types, cotypes, and lectotypes of specimens of mammals known to be in the Chicago Natural History Museum on July 1 1947 The author curator of mammals in the Museum, has used Simpson's classification for orders and families, while placing the genera, species, and subspecies in alphabetical order. The data comprise museum number, parts of specimen collected, sex, age, place of origin, date of collection, and name of collector along with description of the condition of each specimen. The items also contain information as to where the specimen has been described. In an additional list the same type specimens are arranged by locality An index serves to facilitate the use of the catalogue.

SIMPSON GEORGE GAYLORD

The principles of classification and a classification of mammals New York The American Museum of Natural History, 1945 350 p 27 cm. (American Museum of Natural History Bulletin. Vol. 85) $3.50 644

Contents (abridged) Part 1 The principles of taxonomy: Phylogeny Classification. Nomenclature. Part 2 Formal classification of Mammals. Explanation of the detailed classification. Detailed classification. Part 3, Review of mammalian classification. Bibliography Index to technical names. Index to vernacular names.

Note An important work which contains, as the title indicates, both discussion of the principles of mammalian classification and systematic classification. The classification itself occupies more than one-third of the volume and contains all of the supergeneric groups, all well-defined genera, and many doubtful but probably valid genera. However, the author has omitted names which he believes to be invalid. In addition to the systematic arrangement of groups, there is much supplementary information which includes designation of the hierarchic category the preferable technical name for each group author of the name bibliographical citation, geological or geographic range, synonyms, and vernacular names for some of the genera. There are many learned notes on inconsistencies and conflicts in the earlier literature. The third part of the work is made up of discussions of special points and problems in the classification of various groups.

TATE GEORGE HENRY HAMILTON

Mammals of eastern Asia. New York The Macmillan Company 1947 366 p illus. 21 cm. (The Pacific world series) $4.00. 645

Contents (abridged) What is mammal? The home territories of eastern Asiatic mammals. Descriptions of east Asiatic mammals. Glossary Index of common names. Index of scientific names.

Note A handbook for the interested observer rather than the scientist. It describes mammals found on the mainland of eastern Asia from northeastern Siberia through Manchuria, China, Burma, and Indo-China to the Malay Peninsula, and including Japan and Formosa. In these regions made up as they are of deserts, forests, mountains, and plains, and extremes of temperature, there is great diversity of animal life ranging from shrews, bats, bears, gibbons to pandas, gazelles, wild cattle, elephants, and dolphins. Information given on each species includes size and general appearance habitat, relationship with other animals, life histories, and outstanding behavior characteristics.

COMPARATIVE ANATOMY AND EMBRYOLOGY

BONIN GERHARDT VON

The cortex of Galago its relation to the pattern of the primate cortex. With 22 figures. Urbana, Ill. The University of Illinois Press 1945 55 p illus. 27 cm. (Illinois monographs in the medical sciences Vol. v no. 3) Paper $1.50 646

Contents (abridged) Part I, Introduction The problem of morphology. The pattern of the primate cortex. The theory of similitude. Part II, Description of the cortex of Galago: Material and techniques. Biological notes. Gross anatomy Cytoarchitecture of the cortical areas. Part III, Comparisons: Peculiarities of Galago On cortical structure and function. Part IV Concluding remarks and summary References.

Note A systematic study of concrete morphological problem: whether the pattern of the cortex of the primate brain is similar from the lowest to the highest forms. A lesser Galago demidovii, with brain weight of about 3 grams, was selected for the study, and most of the text of the monograph is concerned with description of the gross anatomy and cytoarchitecture of its brain. Related facts reported previously in the literature are worked into the description thus key is provided to all the pertinent literature. The text proper is supplemented by about twenty-five reproductions of line drawings and microphotographs The work also contains discussions bearing on the aim and method of comparative morphology the concept of morphological "pattern, and the theory of similitude as applied to comparative physiology

BONIN GERHARDT VON AND PERCIVAL BAILEY

The neocortex of Macaca mulatta. Urbana, Ill. The University of Illinois Press, 1947 163 p illus. (part col d) 27 cm. (Illinois monographs in the medical sciences. Vol. v no. 4) Paper $3.00 647

Contents: Introduction—Materials and methods. General considerations—Growth of the brain—Brain weight and body weight. The general pattern—The primary sulci—The secondary sulci. The architectural types—The heterotypical cortex—The homotypical cortex—Allocortex. Survey by serial sections. The brain map. Interrelations of areas. Epilogue. Selected bibliography Plates.

Note: This monograph presents a detailed anatomical study and description of the cortex of the brain of the macaque monkey. Based on an examination of a series of sections it provides data which may be compared with similar areas in the brain of man. The brain charts and excellent photomicrographs constitute an important part of the study

COSTELLO, DONALD PAUL AND OTHERS

Recent studies in the mechanisms of embryonic development. Consulting editor Roberts Rugh. New York The New York Academy of Sciences, 1948 206 p illus 24 cm. (New York Academy of Sciences. Annals. Vol. 49 p 661–866 1948) Paper $3.50 648

Contents: Ooplasmic segregation in relation to differentiation, by D P Costello. The organization of the amphibian egg during fertilization and cleavage by G. Fankhauser Significance of the cell membrane in embryonic processes, by J. Holtfreter Prospective areas and differentiation potencies in the chick blastoderm, by D Rudnick. Biochemical differentiation during amphibian development, by E. J. Boell. Form changes during pre-gastrular development, by J. S. Nicholas. The role of nerves in amphibian limb regeneration, by S. M Rose. Quantitative studies on locomotor responses in *Amblystoma* larvae following surgical alterations in the nervous system, by S. R. Detwiler. Functional polarization in developing and regenerating retinae of transplanted eyes, by L. S. Stone

Note: The original papers comprising this volume were first presented at a conference held in January 1947 sponsored by the New York Academy of Sciences. They report the methods and findings of investigations carried out by the authors regarding various aspects of the mechanism and physiology of embryonic development. In most cases the related work of other investigators is briefly reviewed. The majority of the papers include lengthy bibliographies. There is no index

DAVISON ALVIN

Davison's Mammalian anatomy with special reference to the cat. Revised by Frank A. Stromsten. Seventh edition Philadelphia The Blakiston Company 1947 349 p illus. (part col d) 23½ cm. $4 25 649

Contents: Introduction General structure. Skeleton Joints. Muscles. Organs of digestion. Vascular system. Respiratory system. Excretory and reproductive systems. Nervous system Glossary Index.

Note (1724) A long-established textbook which has served as an introduction to anatomy for beginning students for forty-five years. Compared to the sixth edition, published in 1937 this revision has notable improvements which include ninety-two new figures, six of which are reproduced in color from dissections by Professor Stromsten new bibliographies and glossary and letter press printed from entirely re-set type.

EDINGER, TILLY

Evolution of the horse brain. New York The Geological Society of America, 1948 178 p. illus. 25 cm. (The Geological Society of America. Memoir 25) $2.00 650

Contents: Abstract. Part I, The brains of the Equidae Brain-endocast-endocranium relations in the Equidae. Lower Eocene (Wasatchian)—Eohippus. Middle Eocene (Bridgerian)—Orohippus. Upper Eocene (Uintan) Middle Oligocene (Orellan)—Mesohippus. Upper Oligocene (Whitneyan)—Mesohippus. Miocene I—Parahippus. Miocene II—Merychippus. Pliocene (Late Lower Clarendonian)—Pliohippus. Pliocene (Pontian, Clarendonian)—Hipparion and Neohipparion. Quaternary—Equus. Part II, Brain evolution in the Equidae. Medulla oblongata. Cerebellum. Mesencephalon. Pituitary body. Cerebral size relations. Neencephalon. Fissuration. Pronation. Rhinencephalon. Ontogeny and phylogeny. Summary. Bibliography Index.

Note: A morphological study based on endocranial casts of the evolution of the horse brain through 55,000,000 years. The author found that brain development was "not in every phase linked with either increase in body size or skeleton specialization, but he did find that the increase in size was confined chiefly to the cerebral hemispheres, thus validating one portion of Marsh's law. The text is supplemented by about forty figures including four plates of photographs of endocranial casts. There is a comprehensive bibliography

MESSER, HAROLD MADISON

An introduction to vertebrate anatomy Revised edition. New York The Macmillan Company 1947 475 p illus. 22 cm. $4 75 651

Contents: Introduction. The chordates. The protochordates. The vertebrates. Early vertebrate development. The integument. The skeleton. The muscles. The digestive system. The respiratory system. The circulatory system. The excretory system. The reproductive system. The nervous system. The sense organs. The ductless glands. The origin and evolution of the vertebrates. Bibliography Glossary Index.

Note (1733) A college textbook planned for use in one-semester courses. In the present revision the author has improved and increased the number of illustrations, and has added new text and modernized the remainder. The work is now approximately ten per cent longer than before.

PATTEN, BRADLEY MERRILL

Embryology of the pig Third edition. With colored frontispiece and 186 illustrations in the text (containing 412 figures) of which 6 are in color Philadelphia The Blakiston Company 1948 352 p illus (part col d) 24 cm. $3 75 652

Contents (abridged) The reproductive organs—gametogenesis. The sexual cycle—fertilization. The process of cleavage and the formation and early differentiation of the germ layers. The early development of the body form and the establishment of the organ systems. The structure of embryos from nine to twelve millimeters in length The development of the nervous system. The development of the digestive and respiratory systems and the body cavities. The development of the urogenital system. The development of the circulatory system. The histogenesis of bone and the development of the skeletal system. Bibliography Index.

Note. A standard, rather widely used textbook designed for college students who are beginning the study of mammalian development. Fundamental embryological principles and phenomena are stressed rather than aspects which are peculiar to the pig. The book is outstanding for its clear illustrations. An unusual feature is the comprehensive bibliography which is thorough enough to be of value to advanced research workers. The chief change in the present edition is the adoption of a larger page and redrawing of a number of the illustrations in larger size.

RUGH, ROBERTS

A laboratory manual of vertebrate embryology Minneapolis Burgess Publishing Company 1948 229 p illus. 28 cm. Paper $2.25 653

Contents (abridged) Introduction The maturation process. Fertilization and early development, Amphioxus. Early development of the fish. The frog: gonads and maturation. Induction of ovulation and fertilization. The frog's egg: fertilization and cleavage. The frog embryo. The frog tadpole. General review of questions on frog embryology. The chick: gonads and maturation. The chick embryo. Methods for studying living chick embryos. General review questions on chick embryology. Embryology of the pig. Summary of human development. Glossary of embryological terms.

Note (1795a) A laboratory manual for a course in vertebrate embryology which was originally prepared for use at Washington Square College at New York University. The aim is to instruct college students in the fundamentals of embryology as preparation for work in medical colleges in human embryology and for embryological research. Maturation, fertilization, and cleavage are treated in general manner and are followed by detailed studies on frog, chick, and pig embryology. The useful glossary runs to thirty-seven pages. In this edition the work is about thirty-five pages longer

MAN

ANDREWS ROY CHAPMAN

Meet your ancestors a biography of primitive man. New York The Viking Press, 1945 280 p. illus. 22 cm. $3.50 654

Contents: Relatives and ancestors. The human story in brief. Searching for Adam and Eve. The ape that almost became man. The men of the Java jungles. The giants of Java. The romance of Peking man's discovery A cave in the western hills. Piltdown, Rhodesian and Heidelberg men. Enter the cave man. The picture of thousand centuries. The wise man appears. Drama and adventure in cave exploration. The first Americans. Aftermath of the stone age. Man of the future. Bibliography Index.

Note: A popular account of what is known about modern man's prehistoric forbears. It is written in lively style and makes the subject fascinating even for readers who have little inclination toward science. The author who himself took part in some of the important explorations and discoveries that are recounted in the book, was, until his retirement in 1941 Director of the American Museum of Natural History

ASHLEY MONTAGU MONTAGUE FRANCIS

An introduction to physical anthropology Springfield, Ill. Charles C Thomas, 1945 325 p. illus. 22 cm. $5.50 655

Contents: Introduction. Physical anthropology its scope and definition. The primates as zoological group. The origin and evolution of the primates. The origin and evolution of man. The criteria and mechanisms of ethnic group differentiation. The divisions and ethnic groups of man. The significance of bodily differences or the relation between body mind, and culture. Heredity and the influence of the environment upon man. Appendix A practical synopsis of methods of measurement in physical anthropology Bibliography Index.

Note. The general scope of physical anthropology the background knowledge, and some of the basic methods of observation are presented in this excellent work. Intended for an educated reader who is curious about this branch of science, the writing is nevertheless on plane that will appeal to graduate scientists in other fields. Each chapter concludes with an annotated list of related books and periodicals. The extensive bibliography at the end of the volume is supplementary to these chapter lists.

COLIN EDWARD CECIL

Elements of genetics Mendel's laws of heredity with special application to man. Second edition. Philadelphia The Blakiston Company 1946. 402 p illus. 23 cm. $3.50 656

Contents (abridged) Mendel Student, priest, teacher investigator. Dominance and the law of segregation. Dihybrids: The law of independent assortment. Chromosomes and Mendel's laws. The factor principle: Action and interaction of genes. The rediscovery of Mendel's work. Linkage and crossing-over Heredity in man. Sex determination and sex differentiation. Sex linked heredity Heredity and environment. The gene and mutation. Inbreeding and crossbreeding. Heredity and evolution. Improvement of the human species (eugenics) Glossary Index.

Note (1370) Written as text and reference work, this book includes large amounts of material on man, making it of interest to the general reader as well as to the student of the subject of genetics. Historical references and bibliographical footnotes are included in each chapter. In this edition the amount of illustrative material has been almost doubled. The text has been thoroughly revised, and the type has been reset. Newly added, for example, are the descriptions, under Heredity in man, of blood types M-N and the Rh blood factor.

COUNT, EARL WENDEL

Brain and body weight in man their antecedents in growth and evolution. A study in dynamic somatometry New York The New York Academy of Sciences 1947 130 p illus. 23 cm. (New York Academy of Sciences Annals. Vol. 56 p 993–1122 1947) Paper, $2 00 657

Contents (abridged) Section I, Introduction Orientation. Standpoint and method. Principles and terminology Section II, Ontogeny: Character of the data. Range of the materials. Reliability of the formulas Behavior of the growth curves. Section III, Comparative anatomy Part One, Range of the materials Adults. Part Two The "phylogeny" of brain-body weight expressed as $y = ax^b$ Von Bonin correlation coefficient and regression formula for the mammals as class. The exponent of cephalization. A statistical anatomy of the mammalian class, assuming the validity of the exponent of cephalization The reptilian substratum. The statistical anatomy of the Mammalia, continued. The statistical anatomy of the Mammalia, concluded. Section IV Ontogeny and comparative anatomy Section Summary Conclusions. References consulted.

Note A specialized and technical study wherein the author presents the results of his investigations regarding the relationship between brain weight and body weight in man. His primary purpose was to determine whether this relationship is peculiar to man, or whether it applies to all mammals. Mathematical and statistical methods are employed and data and graphs utilized in the study are tabulated in the appendix. There is no index.

FIELD HENRY compiler

Contributions to the anthropology of the Soviet Union (with five plates) Washington, D C The Smithsonian Institution 1948 244 p. illus. 24 cm. (Smithsonian miscellaneous collections Vol. 110 number 13 Publication 3947) Paper $2.00. 658

Contents: All-Union Conference on Archeology Recent work in anthropology Ancient peoples and their origin. Modern races and their history Variations in the structure of human bodies. Paleolithic sites: Introduction Primitive Mousterian and Chellean sites. Mousterian sites. Upper Paleolithic and Epipaleolithic sites. Miscellaneous archeological Introduction. Ukraine. Crimea. Black Sea coast. North Caucasus South Caucasus. Armenia. Don region. Volga region. Central Asia. Siberia. Miscellaneous anthropological Introduction. Anthropology of the western Pamirs. Iranian tribes of the western Pamirs. Mountain Tajiks. Peoples of Daghestan. Uzbeks of Khorezm Kazakhs of the Altai. Western Kazakhs. Turkomans of the Khorezm and the North Caucasus. A study of the Turkish peoples, 1934–1934 Paleoanthropology of the lower Volga area. Craniology of the Tatars of the Golden Horde. Craniology of the Kalmyks. The Tichl (Ofaxl) cranial type. Two types of Yakut crania. Craniology of the Orochis of the maritime area. Craniology of the Aleuts. Origin of the Mongol. Origin of the Eskimo. Observations on the tibia. Rendition and growth in man. A study in blood groups in the Caucasus. Dermatoglyphics of the Turkomans. The Tinderdessue skeleton from Yatna-Koba, Crimea.

Note. This study is divided into two main sections, one dealing with archeology the other with physical anthropology It presents summaries of the work of Soviet Russian anthropologists for the benefit of persons not able to read the Russian language, based upon Soviet published and unpublished materials. There is no bibliography the references being given in footnotes. The second half of the work includes statistics on pigmentation, stature, cephalic index, head breadth, facial index, nasal index, etc., for different Soviet peoples.

GATES REGINALD RUGGLES

Human ancestry from a genetical point of view Cambridge Mass. Harvard University Press, 1948 422 p. illus. 24 cm. $7.50 659

Contents: Foreword by Earnest Hooton. Introduction. Principle of parallel evolution. Evolution of the mammals. Evolution of the Hominidae. Head shapes and their inheritance. Local evolution of modern racial types: from Pithecanthropus to the Australian aborigines. Evolution of man in south and east Africa. Human evolution in Europe. From Sinanthropus to the American Indians. Polynesians, Melanesians, and Negroes. Some principles of speciation in primates. Paleontology speciation, and sterility Index.

Note. Knowledge gathered from both physical anthropology and genetics is here brought to bear on the problem of human evolution. The author' main thesis is that present-day races of man have not evolved from single stock but rather have evolved independently on the different continents from related but diverse ancestors. He has taken into account both the standard evidence from paleontology and the recent finds of prehistoric man in South Africa and Java. In the final chapter he argues against using interfertility as basis for demarcation into species. The work is addressed to advanced students and to graduate scientists. Extensive lists of references accompany most of the chapters.

GATES REGINALD RUGGLES

Human genetics. New York The Macmillan Company 1946 2 v illus. 24 cm. $15 00 660

Contents Volume I: Introduction. General principles of heredity in man. Human cytology Linkage. Eye color and hair color. The inheritance of color-blindness. Hereditary variations and abnormalities of the eye. Hereditary variations and abnormalities of the ear Albinism. Abnormalities and diseases of the skin, hair nails and teeth. Anatomical abnormalities of the hands, feet and limbs. Anomalies of the skeleton and of bone structure. Metabolic defects and derangements. Haemophilia and related hereditary conditions. Other inherited diseases and abnormalities of the blood system. The blood groups—genetical and racial aspects. Volume II: Allergy Hereditary syndromes. Inherited abnormalities of the alimentary canal and adnexa. Inheritance of various sexual and intersexual conditions. Twins and twinning. Inherited muscular and neuromuscular abnormalities. Hereditary variations, defects and diseases of the nervous system. The inheritance of mental defects. The inheritance of normal mental differences Cancer the genetic aspects. Constitution, body-build and susceptibility Congenital anomalies. Inheritance of stature and size. Anthropological characters. Odds and ends. Index.

Note A reference book of the current knowledge of human heredity It is based on comprehensive review of the international literature. The material included has been selected from the standpoint of significance, but the author disclaims any attempt at an exhaustive presentation However the scope is broad in the sense that wide range of biological variations is covered. In such chapters as that on eye abnormalities it is also very detailed. The subject is treated from the biological rather than the purely genetic viewpoint, and the book is therefore of value not only to geneticists but to physical anthropologists and the medical profession as well. Extensive lists of the literature accompany each chapter.

GLADWIN HAROLD STERLING

Men out of Asia. Illustrated by Campbell Grant. New York Whittlesey House Mc Graw Hill Book Company Inc. 1947 390 p illus. (part col'd) 21 cm. $4.00 661

Contents (abridged) Foreword and hindthoughts, by Earnest A. Hooton. New worlds for old. Who' who in the new world. Australoids in Australia. Australoids—here there and everywhere The first migration. Negroids in the making. The second migration. The basket makers of northeastern Arizona Many inventions and discoveries. The third migration. The fourth migration. Score at the end of the fourth inning The fifth migration. The ways and means of the Mongoloids. Gods, bearded and white The world of 316 B C. Of men and ships and great waters. Caribs and Arawaks. Score at the end f the seventh inning How to stage migration. How to found civilization as bearded white god in Peru The metal age in South America. Civilizations made to order Glyphs. Civilizing here and there around the Caribbean. All sorts and conditions of Mongoloids. Index.

Note This book, written in readable style and illustrated with humorous caricatures, puts forth new theories on the aboriginal peopling of the western hemisphere and the succession of migrations of people and cultures before Columbus. The author recognizes that his theories depart radically from previous writings in American anthropology and "that this tale will need great deal of patching and strengthening before it will carry much weight. This may seem strange way to launch new theory but I am more concerned with opening up new channels of inquiry than in trying to provide pat answers.

HOOTON EARNEST ALBERT

Up from the ape. Revised edition. New York The Macmillan Company, 1946 788 p. illus. 25 cm. Text edition $5.25 trade edition, $7.00 662

Contents (abridged) Part I, Man's relatives: Why man is primate. Part II, The primate life cycle Tracing evolutionary steps. Getting backbone—the vertebrate stage. Climbing the family tree—arboreal pronograde stage. Becoming erect—gibbonoid stage. Standing up and walking—the bipedal humanoid stage. Were man's ancestors arboreal arm-swingers or pronograde ground apes? Phylogeny Part III, The individual life cycle. Being born—prenatal development. Getting married and having baby Getting old and dying. Part IV Fossil ancestors and collaterals: Why we hunt for ancestors. Toothy mementos of fossil apes. The South African man-apes. Neanderthal man—Darwin's first witness. Precocious advent of Homo sapiens in England. Making family tree. Part Heredity and race Genetics and racial classification. The physical tests of race. The physiological tests of race. Racial history Racial quality Part VI, The anthropology of the individual The problem of classification. The Sheldon system of somatotyping. The stages and status of human evolution. Bibliography Appendix—Elementary anthropometry Index.

Note An interpretative account, written largely from the viewpoint of physical anthropology of the scientific knowledge that bears on the evolution of man together with survey of the physical characteristics of present-day man. It is written in lively style that embraces many technical terms but is very readable nevertheless. Originally designed for educated general readers, the work is read and respected by college students and scientists as well. Compared to the first edition published in 1931 the second edition has been extensively rewritten and much new material—including the appendix on anthropometry—has been added.

HRDLIČKA ALEŠ

Hrdlička s practical anthropometry Third edition, edited by T D Stewart. Philadelphia The Wistar Institute of Anatomy and Biology 1947 240 p illus. 29 cm. $3 75 663

Contents (abridged) Part I, General considerations: The subject defined. Instruments Selection of measurements. Treatment of data. Part II, Measuring the living and cadavers: Directions for measuring. Embryos and fetuses. Internal organs and other soft parts. Physiological tests. Nonmetrical observations. The technique of blood-group tests. Fingerprinting Plaster casts. Part III, Measuring the skeleton Craniometry Landmarks on the skull. Directions for measuring the skull. Osteometry Directions for measuring the bones. Variations in bone shapes. Estimation of stature from parts of the skeleton. Part IV Appendices. Literature cited. Index.

Note. (1763sz) The standard work on scientific methods of measuring the human body and its parts. Principal changes in this edition are: the rearrangement of many sections in the interest of greater clarity the alphabetical listing of references at the end of the book, the addition of footnotes calling attention to newer data and opinions, and inclusion in full of the international agreements for unification of anthropometric measurements. Photographs and drawings are provided which clearly show the various pieces of special measuring apparatus and the methods of using them. The editor of this edition is Curator Division of Physical Anthropology of the U S. National Museum.

HUNTINGTON ELLSWORTH

Mainsprings of civilization. New York John Wiley & Sons Inc., 1945 660 p. illus. 22 cm. $4 75 664

Contents (abridged) Part I, The background of civilization. Part II, Heredity: The problem of race The instability of races Migration and human quality The Puritans as test case. The interplay of culture and heredity Evolution of divergent types. Jenkes and Nams. Part III, Physical environment and human activity: The geographic pattern of civilization. Health and national character Human activity and temperature. Social conditions, religion, and

climate. Regions and seasons of mental activity. Psychological reactions to weather. The distribution of civilization. Diet and national character. Cycles, rhythms, and periodicities. Broader aspects of environmental cycles. Historic phases of climatic cycles. World-wide climatic cycles. Geographical optima of civilization. Bibliography. Index.

Note. In this work this internationally famous author has summarized many of his previously published ideas and now offers an encyclopedic approach to the effect of heredity and climate on human life. The research has been extensive, and diagrams, charts, and tables are numerous. Particular stress is laid on the influence of "kiths" or cultural groups in determining hereditary superiority and upon the importance of climate in modifying human activity. In connection with the latter the author puts forth the hypotheses that there is an association between atmospheric ozone and animal reproduction and that there appears to be a connection between business cycles and atmospheric electricity. These are new ideas not advanced in his previous work.

MULLER, HERMANN JOSEPH, AND OTHERS

Genetics medicine and man Ithaca N Y Cornell University Press 1947 158 p illus. 24 cm. $2.25 665

Contents: Part I, by H. J. Muller: Genetic fundamentals—The work of the genes—The dance of the genes. Part II, by C. C. Little: Parental influence. Growth and individuality. Part III, by Laurence H. Snyder: Human heredity. The mutant gene in man. Index.

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WEIDENREICH, FRANZ

Apes, giants, and man. Chicago Ill. The University of Chicago Press, 1946 122 p. illus. 23 cm. $3 00. 666

Contents: Man and his simian ancestry. The development of the specifically human form. Giants as earliest ancestors. The human races: principles of their classification and origin. Form and qualities of the human brain and skull in the light of evolution. Bibliography. Index.

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WEIDENREICH FRANZ

Giant early man from Java and South China. New York The American Museum of Natural History 1946 134 p illus. 27 cm. (The American Museum of Natural History Anthropological papers. Vol. 40 part I) Paper $2.00 667

Contents: The new finds in Java. Von Koenigswald's earlier discoveries. Von Koenigswald's latest discoveries. *Pithecanthropus* skull IV (*Pithecanthropus robustus* Weidenreich). Morphological character of the Sangiran mandible of 1941, *Meganthropus palaeojavanicus* von Koenigswald. Morphology of the Sangiran mandible of 1939. *Gigantopithecus blacki* von Koenigswald. The *Pithecanthropus* problem. *Gigantopithecus*, *Meganthropus*, and *Pithecanthropus*. The giant hominids and their bearing on the problem of human evolution. Summary. Literature cited. Explanation of illustrations.

Note: A detailed, technical study of the pre-hominid and hominid remains discovered in South China and in Java by Dr G. H. R. von Koenigswald. The discoveries are described minutely and their significance to the knowledge of prehistoric man, particularly his evolution, is discussed. There are twelve plates that contain mostly reproductions of photographs of the remains.

WHITNEY DAVID DAY

Family skeletons Lincoln, Nebr University of Nebraska Press, 1946 284 p. illus. 23 cm. $4 00 668

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Note. (1743) A companion volume to the author's *Family treasures*, Lancaster Pa.: Jaques Cattell Press, 1942 which dealt with the inheritance of normal characteristics, this book pictures the human diseases and physical abnormalities that are believed to be caused by factors of heredity. There are reproductions of approximately 200 photographs, and these constitute the main part of the work. The accompanying text is brief. It describes the abnormalities and states whether the condition is dominant or recessive. Extensive bibliographies guide the reader to sources of further information. The book is intended for non-specialists, and is perhaps most useful as an elementary reference book.

YEARBOOK OF PHYSICAL ANTHROPOLOGY 1945

Edited by Gabriel W Lasker New York The Viking Fund Inc., 1946 214 p illus. 27 cm. Paper Gratis. 669

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GATES, REGINALD RUGGLES

Human ancestry from a genetical point of view Cambridge, Mass. Harvard University Press, 1948 422 p illus. 24 cm. $7.50 659

Contents: Foreword by Earnest Hooton. Introduction. Principle of parallel evolution. Evolution of the mammals. Evolution of the Hominidae. Head shapes and their inheritance. Local evolution of modern racial types: from Pithecanthropus to the Australian aborigines. Evolution of man in south and east Africa. Human evolution in Europe. From Sinanthropus to the American Indians. Polynesians, Melanesians, and Negroes. Some principles of speciation in primates. Paleontology, speciation, and sterility. Index.

Note: Knowledge gathered from both physical anthropology and genetics is here brought to bear on the problem of human evolution. The author's main thesis is that present-day races of men have not evolved from a single stock but rather have evolved independently on the different continents from related but diverse ancestors. He has taken into account both the standard evidence from paleontology and the recent finds of prehistoric man in South Africa and Java. In the final chapter he argues against using interfertility as a basis for demarcation into species. The work is addressed to advanced students and to graduate scientists. Extensive lists of references accompany most of the chapters.

GATES, REGINALD RUGGLES

Human genetics. New York The Macmillan Company 1946 2 v illus. 24 cm. $15.00 660

Contents: Volume I: Introduction. General principles of heredity in man. Human cytology. Linkage. Eye color and hair color. The inheritance of color-blindness. Hereditary variations and abnormalities of the eye. Hereditary variations and abnormalities of the ear. Albinism. Abnormalities and diseases of the skin, hair, nails and teeth. Anatomical abnormalities of the hands, feet and limbs. Anomalies of the skeleton and of bone structure. Metabolic defects and derangements. Hemophilia and related hereditary conditions. Other inherited diseases and abnormalities of the blood system. The blood groups—genetical and racial aspects. Volume II: Allergy. Hereditary syndromes. Inherited abnormalities of the alimentary canal and adnexa. Inheritance of various normal and intersexual conditions. Twins and twinning. Inherited muscular and neuromuscular abnormalities. Hereditary variations, defects and diseases of the nervous system. The inheritance of mental defects. The inheritance of normal mental differences. Cancer: the genetic aspects. Constitution, body-build and susceptibility. Congenital anomalies. Inheritance of stature and size. Anthropological characters. Odds and ends. Index.

Note: A reference book of the current knowledge of human heredity. It is based on a comprehensive review of the international literature. The material included has been selected from the standpoint of significance, but the author disclaims any attempt at an exhaustive presentation. However the scope is broad in the sense that a wide range of biological variations is covered. In such chapters as that on eye abnormalities it is also very detailed. The subject is treated from the biological rather than the purely genetic viewpoint, and the book is therefore of value not only to geneticists but to physical anthropologists and the medical profession as well. Extensive lists of the literature accompany each chapter.

GLADWIN, HAROLD STERLING

Men out of Asia. Illustrated by Campbell Grant. New York Whittlesey House, McGraw Hill Book Company Inc. 1947 390 p illus. (part col'd) 21 cm. $4.00 661

Contents (abridged): Foreword and hindthoughts, by Earnest A. Hooton. New worlds for old. Who's who in the new world. Australoids in Australia. Australoids—here, there and everywhere. The first migration. Negroids in the making. The second migration. The basket makers of northeastern Arizona. Many inventions and discoveries. The third migration. The fourth migration. Score at the end of the fourth inning. The fifth migration. The ways and means of the Mongoloids. Gods, bearded and white. The world of 314 B.C. Of men and ships and great waters. Caribs and Arawaks. Score at the end of the seventh inning. How to stage a migration. How to found a civilization as a bearded white god in Peru. The metal age in South America. Civilizations made to order. Glyphs. Civilizing here and there around the Caribbean. All sorts and conditions of Mongoloids. Index.

Note: This book, written in a readable style and illustrated with humorous caricatures, puts forth new theories on the aboriginal peopling of the western hemisphere and the succession of migrations of people and cultures before Columbus. The author recognizes that his theories depart radically from previous writings in American anthropology and "that this tale will need a great deal of patching and strengthening before it will carry much weight. This may seem a strange way to launch a new theory but I am more concerned with opening up new channels of inquiry than in trying to provide pat answers."

HOOTON, EARNEST ALBERT

Up from the ape. Revised edition. New York The Macmillan Company, 1946 788 p. illus. 25 cm. Text edition, $5.25 trade edition, $7.00 662

Contents (abridged): Part I, Man's relatives: Why man is a primate. Part II, The primate life cycle: Tracing evolutionary steps. Getting a backbone—the vertebrate stage. Climbing the family tree—arboreal prepriмate stage. Becoming erect—gibbonoid stage. Standing up and walking—the bipedal humanoid stage. Were man's ancestors arboreal arm-swingers or pronograde ground apes? Phylogeny. Part III, The individual life cycle: Being born—prenatal development. Getting married and having a baby. Getting old and dying. Part IV, Fossil ancestors and collaterals: Why we hunt for ancestors. Toothy mementos of fossil apes. The South African man-apes. Neanderthal man—Darwin's first witness. Precocious advent of Homo sapiens in England. Making a family tree. Part V, Heredity and race: Genetics and racial classification. The physical tests of race. The physiological tests of race. Racial history. Racial quality. Part VI, The anthropology of the individual: The problem of classification. The Sheldon system of somatotyping. The stages and status of human evolution. Bibliography. Appendix—Elementary anthropometry. Index.

Note: An interpretative account, written largely from the viewpoint of physical anthropology, of the scientific knowledge that bears on the evolution of man, together with a survey of the physical characteristics of present-day man. It is written in a lively style that embraces many technical terms but is very readable nevertheless. Originally designed for educated general readers, the work is read and respected by college students and scientists as well. Compared to the first edition published in 1931 the second edition has been extensively rewritten and much new material—including the appendix on anthropometry—has been added.

HRDLIČKA, ALEŠ

Hrdlička's practical anthropometry. Third edition, edited by T. D. Stewart. Philadelphia The Wistar Institute of Anatomy and Biology 1947 240 p illus. 29 cm. $3.75 663

Contents (abridged): Part I, General considerations: The subject defined. Instruments. Selection of measurements. Treatment of data. Part II, Measuring the living and cadaver: Directions for measuring. Embryos and fetuses. Internal organs and other soft parts. Physiological tests. Nonmetrical observations. The technique of blood-group tests. Fingerprinting. Plaster casts. Part III, Measuring the skeleton: Craniometry. Landmarks on the skull. Directions for measuring the skull. Osteometry. Directions for measuring the bones. Variations in bone shapes. Estimation of stature from parts of the skeleton. Part IV: Appendices. Literature cited. Index.

Note: (1743ss) The standard work on scientific methods of measuring the human body and its parts. Principal changes in this edition are: the rearrangement of many sections in the interest of greater clarity, the alphabetical listing of references at the end of the book, the addition of footnotes calling attention to newer data and opinions, and inclusion in full of the international agreements for unification of anthropometric measurements. Photographs and drawings are provided which clearly show the various pieces of special measuring apparatus and the methods of using them. The editor of this edition is Curator, Division of Physical Anthropology of the U. S. National Museum.

HUNTINGTON, ELLSWORTH

Mainsprings of civilization. New York John Wiley & Sons, Inc., 1945 660 p. illus. 22 cm $4.75 664

Contents (abridged): Part I, The background of civilization. Part II, Heredity: The problem of race. The instability of races. Migration and human quality. The Puritans as a test case. The interplay of culture and heredity. Evolution of divergent types. Jukes and Nuda. Part III, Physical environment and human activity: The geographic pattern of civilization. Health and national character. Human activity and temperature. Social conditions, religion, and

climate. Regions and seasons of mental activity. Psychological reactions to weather. The distribution of civilization. Diet and national character. Cycles, rhythms, and periodicities. Broader aspects of environmental cycles. Historic phases of climatic cycles. World-wide climatic cycles. Geographical optima of civilization. Bibliography. Index.

Note: In this work this internationally famous author has summarized many of his previously published ideas and now offers an encyclopedic approach to the effect of heredity and climate on human life. The research has been extensive, and diagrams, charts, and tables are numerous. Particular stress is laid on the influence of "kiths" or cultural groups in determining hereditary superiority and upon the importance of climate in modifying human activity. In connection with the latter the author puts forth the hypotheses that there is an association between atmospheric ozone and animal reproduction and that there appears to be a connection between business cycles and atmospheric electricity. These are new ideas not advanced in his previous work.

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Genetics, medicine and man. Ithaca N Y Cornell University Press 1947 158 p. illus. 24 cm. $2.25 665

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Contents: The new finds in Java. Von Koenigswald's earlier discoveries. Von Koenigswald's latest discoveries. *Pithecanthropus* skull IV (*Pithecanthropus robustus* Weidenreich). Morphological character of the Sangiran mandible of 1941, *Meganthropus palaeojavanicus* von Koenigswald. Morphology of the Sangiran mandible of 1939. *Gigantopithecus blacki* von Koenigswald. The *Pithecanthropus* problem. *Gigantopithecus*, *Meganthropus*, and *Pithecanthropus*. The giant hominids and their bearing on the problem of human evolution. Summary. Literature cited. Explanation of illustrations.

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WHITNEY, DAVID DAY
Family skeletons. Lincoln, Nebr University of Nebraska Press, 1946 284 p. illus. 23 cm. $4.00 668

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Contents: Physical anthropology during the year, by G. W. Lasker. Second seminar in physical anthropology, by B. Kaplan. Evaluation of the summer seminar, by W. M. Krogman. Physical anthropology applied to problems of war, by W. E. Le Gros Clark. Some remarks on physiological anthropology, by J. S. Weiner. Racial significance of patellar grooves, by M. A. Shah. Immediate problems of human palaeontology, by W. E. Le Gros Clark. Fossil finds in Kenya—ape or primitive man? by L. S. B. Leakey. The evolution and devolution of the human face, by E. A. Hooton. The concept of serial areas in specificity, by W. L. Straus, Jr. The use and abuse of taxonomy, by J. O. Brew. Studies in pigmentation, by F. Pinkus. Physiologic pigmentation of the oral and cutaneous tissues in the Negro, by C. O. Dummett. Platymeria, by W. Townsley. The effect of facial paralysis on the growth of the skull of rat and rabbit, by S. L. Washburn. The effect of removal of the zygomatic arch in the rat, by S. L. Washburn. The sequence of epiphyseal union in the opossum, by S. L. Washburn. Anthropometric characteristics and physical fitness, by C. C. Seltzer. Sex differences in cephalic index during growth, by W. I. Wallis and Ruth Sawtell Wallis. Use of body measurement in the school health program, by H. C. Stuart and H. V. Meredith. Normal growth and development during adolescence, by H. C. Stuart. The Fels composite sheet—a practical method for analyzing growth progress, by L. W. Sontag and

E. L. Reynolds. Tables for predicting adult height from skeletal age and present height, by Nancy Bayley

—— Yearbook of physical anthropology 1947 Edited by G W Lasker and J L. Angel. Volume three New York The Viking Fund, Inc. 1948 278 p illus. 27 cm. Paper Gratis. 671

Contents Physical anthropology in 1947—time of transition, by J. L. Angel. The third summer seminar in physical anthropology by B A. Kaplan. The third International Congress of Anthropological and Ethnological Sciences, by H. Cummins. A guide to American growth studies—a report to the Viking Fund summer seminar in physical anthropology by J M. Tanner A statistical study of the differences between Bantu, Hottentot and Bushman skulls, by J A. Keen. The trend of human evolution, by F Weidenreich. Natural selection and the mental capacities of mankind, by Th. Dobzhansky and M. F Ashley Montagu. Some complexities of human structure by W L. H. Duckworth. Brachium and human evolution, by A. A. Abbie. Adaptive changes induced by natural selection in wild populations of Drosophila, by Th. Dobzhansky The inguinal canal of primates, by R. A. Miller Observations on the anatomy of the fossil Australopithecinae, by W E. Le Gros Clark. The numbers and distribution of mankind, by C. B. Fawcett. Sickle cell disease in northern Rhodesia, by E. A. Beet. Anthropometric problems in the Royal Air Force, by G. M. Morant. Some anatomical and physiological principles concerned in the design of seats for naval war-weapons, by H. D. Darcus and A. G. M. Weddell. The development of visual perception in man and chimpanzee, by A. H. Riesen. The mandible of the Swartkrans ape-man, Paranthropus, by R. Broom. The use of genetically determined characters, especially serological factors such as Rh, in physical anthropology by W C. Boyd. The morphological level of personality by J. M. Tanner. Muscles of the pelvic limb—a study of the differences between bipeds and quadrupeds, by H. A. Haxton. The relation of the temporal muscle to the form of the skull, by S. L. Washburn. Factors concerned in the growth and development of the jaws and teeth, by J. E. Harris. Sexual differences in the pelvis, by O. S. Heyns. Further observations on the Florisbad skull, by T F Dreyer.

Note. These collections of papers are one of the products of an annual seminar which is held at Columbia University and is supported by the Viking Fund. Their purpose is to provide scientists in this field with compilation of significant papers in their field that have appeared in periodicals other than the *American journal of physical anthropology*

GENERAL

BAILLIF RALPH NORMAN AND DONALD L KIMMEL

Structure and function of the human body 158 illustrations. Philadelphia J B Lippincott Company 1945 328 p. illus. 21 cm. $3.00 672

Contents: Unit One, Survey of the fields to be considered and method of study: Protoplasm and cells. Physical organization in the animal body Organ systems of the body Unit Two, Skeletal, muscular and circulatory systems: The skeletal system. The muscular system. The circulatory system. Unit Three, Digestive and respiratory systems: The digestive system. The respiratory system. Unit Four, Urogenital, endocrine and nervous systems: The urogenital system. Prenatal development. The endocrine system. The nervous system. Glossary Index.

Note: The particular value of this work lies in its compactness. It provides illustrations and descriptions of the various systems of the human body in a small fraction of the space that is used in the typical book on human anatomy The illustrations are clear and adequately detailed. The descriptions cover structure and function. The glossary is an extra feature of considerable value. This book is suitable for use in courses offered to students of nursing, biology and general science and as a desk reference book.

CATES H. A.

Primary anatomy Baltimore The Williams & Wilkins Company 1948 478 p. illus. 24 cm. $6.00 673

Contents: The beginning of life. Skeletal system. Articular system. Muscular system. Digestive system. Respiratory system. Urinary system. Generative or reproductive system. Circulatory system. Nervous system. Eye and ear Skin and endocrine glands Index.

Note A textbook of anatomy for nonmedical students such as nurses, physiotherapists, and occupational therapists. With this audience in mind, the author has chosen the functional approach rather than the topographical and he has elaborated with more detail the chapters on the skeletal, articular muscular nervous, and circulatory systems than those dealing with other systems. Illustrations, of which there are nearly 400, have been especially designed to conform to the needs and background of the nonmedical reader An introductory chapter describes the development of the organism from the cell, the systems of the body and the various methods of studying anatomy The author is Professor of Anatomy at the University of Toronto.

EDWARDS LINDEN FOREST

Concise anatomy 324 illustrations. Philadelphia The Blakiston Company 1947 548 p illus. (part col'd) 26 cm. $5.50. 674

Contents (abridged) Introduction. Part 1 General anatomy: General microscopic and developmental anatomy General osteology General arthrology General myology General neurology General angiology Part 2, The superior extremity Osteology of the superior extremity Musculature of the superior extremity Articulations of the superior extremity Vessels and nerves of the superior extremity Part 3, The inferior extremity Part 4 Anatomy of the head: The skull. Musculature of the head. Vessels and nerves of the head. Part 5, Anatomy of the neck and trunk. Part 6, Splanchnology The respiratory system. The digestive system. The urogenital system The endocrine system Vessels and nerves of the thoracic and abdominal viscera. Bibliography Index

Note. A revision of an earlier text entitled Anatomy for physical education, Philadelphia, 1934. It is not intended to replace more comprehensive treatises on human anatomy but is designed to meet the need of students of physical education, occupational therapy nursing who require a less detailed knowledge of human anatomy than is required by medical students. The descriptions of each region of the body include brief discussion of the diagnosis and treatment of injuries commonly sustained in athletics. Many of the chapters now include material on the microscopic and developmental features of the various organs. Parts 3 and 4 are developed similarly to Part 2, the chapter titles of which are given in full in the above contents.

GRANT JOHN CHARLES BOILEAU

An atlas of anatomy Second edition. Baltimore The Williams and Wilkins Company 1947 496 p illus (part col d) 29 cm. $11.00. 675

Contents: The upper limb. The abdomen. The perineum and pelvis. The lower limb. The vertebrae and the vertebral column. The thorax. The head and neck. Index.

Note An outstanding work of its kind. It consists entirely of illustrations with accompanying descriptive legends. To insure accuracy the artists who prepared the drawings worked with the dissected specimens before them and built up their drawings on tracings made from photographs of the same specimens. Compared to the first edition, there are about 200 additional illustrations and sixteen revised drawings. Color has been used on a considerable number of the illustrations. The total number of figures is now 191 and many of the figures include more than one drawing.

GRANT JOHN CHARLES BOILEAU

A method of anatomy descriptive and deductive. Fourth edition. Baltimore The Williams and Wilkins Company 1948 852 p. illus. 26 cm. $7 00 676

Contents (abridged) Descriptive terms. Advice to the dissector Section I, General. Bones and cartilage. Articulations or joints. Muscles. Blood vascular and lymphatic systems. Peripheral nerves. Digestive system. Respiratory system. Urinary system. Genital system. Skin and its appendages, and the fascia. Section II, The upper limb Cutaneous nerves and veins. Joints of the upper limb. Section III, The abdomen Anterior abdominal wall. Abdomino-pelvic cavity Section IV The perineum and pelvis: Male pelvis. Female pelvis. Section [illegible] The lower limb. Section VI, The thorax Bony thorax. Pericardium and contents. Section VII, The head and neck: Posterior triangle of the neck. Contents of the cranium. Anterior triangle of the neck. Pharynx. Larynx. Section VIII, Miscellaneous: Autonomic nervous system. Bones of the skull—the pectoral girdle—the carpus. Index.

Note A successful textbook for first-year medical students It is shorter than some standard treatments for the same audience. Brevity has been obtained partly by not including plate-type drawings of larger regions and partly by a compact but ably written text. The author's method of instruction is to present the usual descriptions of details and to interpret them from the standpoint of anatomic relationships. The understanding of regions is stressed, and in accord with this system there is no separate consideration of the skeleton. In the present edition there are 500 figures, an increase of sixty-eight as compared to the previous edition; and several parts of the text have been rewritten, and the type has been re-set with more frequent use of bold face. Most of the figures are diagrammatic and illustrate details of small regions or structures Larger more exact illustrations are available in the author's *An atlas of anatomy* described above.

GRAY HENRY

Anatomy of the human body Twenty fifth edition edited by Charles Mayo Goss. Illustrated with 1263 engravings. Philadelphia Lea & Febiger 1948 1478 p. illus. (part col d) 27 cm. $14 00 677

E. L. Reynolds. Tables for predicting adult height from skeletal age and present height, by Nancy Bayley

—— Yearbook of physical anthropology 1947 Edited by G W Lasker and J L. Angel. Volume three. New York The Viking Fund Inc., 1948 278 p illus. 27 cm Paper Gratis 671

Contents: Physical anthropology in 1947—time of transition, by J. L. Angel. The third summer seminar in physical anthropology by B. A. Kaplan. The third International Congress of Anthropological and Ethnological Sciences, by H. Cummins A guide to American growth studies—a report to the Viking Fund summer seminar in physical anthropology by J. M. Tanner A statistical study of the differences between Bantu, Hottentot and Bushman skulls, by J. A. Kern. The trend of human evolution, by F Weidenreich. Natural selection and the mental capacities of mankind, by Th. Dobzhansky and M. F Ashley Montagu. Some complexities of human structure, by W L. H. Duckworth. Headform and human evolution, by A. A. Abbie. Adaptive changes induced by natural selection in wild populations of Drosophila, by Th. Dobzhansky The inguinal canal of primates, by R. A. Miller. Observations on the anatomy of the fossil Australopithecinae, by W E. Le Gros Clark. The numbers and distribution of mankind, by C. B. Fawcett. Sickle cell disease in northern Rhodesia, by E. A. Beet. Anthropometric problems in the Royal Air Force, by G. M. Morant. Some anatomical and physiological principles concerned in the design of seats for naval war-weapons, by H. D Darcus and A. G. M. Weddell. The development of visual perception in man and chimpanzee, by A. H. Riesen. The mandible of the Sterkfontein ape-man, Plesianthropus, by R. Broom. The use of genetically determined characters, especially serological factors such as Rh, in physical anthropology by W C. Boyd. The morphological level of personality by J M. Tanner. Muscles of the pelvic limb—a study of the differences between bipeds and quadrupeds, by H. A. Haxton. The relation of the temporal muscle to the form of the skull, by S. L. Washburn. Factors concerned in the growth and development of the jaws and teeth, by J. E. Harris. Sexual differences in the pelvis, by O. S. Heyns. Further observations on the Florisbad skull, by T F Dreyer.

Note. These collections of papers are one of the products of an annual seminar which is held at Columbia University and is supported by the Viking Fund. Their purpose is to provide scientists in this field with compilation of significant papers in their field that have appeared in periodicals other than the *American journal of physical anthropology*

KUNTZ, ALBERT

The autonomic nervous system. Third edition, enlarged and thoroughly revised. Illustrated with 91 engravings Philadelphia Lea & Febiger 1945 687 p illus. 24 cm. $8.50 684

Contents (abridged): Morphology and distribution of the autonomic nervous system. The autonomic ganglion cells and ganglia. Central autonomic centers and conduction pathways. General physiology Development. Innervation of the heart. Innervation of the blood vessels. Innervation of the respiratory system. Innervation of the digestive tube. Innervation of the biliary system. Innervation of the pancreas, spleen, thyroid, adrenals and bone marrow Innervation of the urinary organs. Innervation of the sex organs. Innervation of the skin and its appendages. Innervation of cephalic autonomic effectors. Sympathetic nerves in relation to skeletal muscle. Histopathology Visceral sensitivity and referred pain. Autonomic imbalance. The autonomic nervous system in disease. Autonomic neurosurgery Bibliography Index.

Note (1784) A relatively comprehensive survey of the knowledge of the autonomic nervous system. The author disclaims any attempt at completeness; although his bibliography is set in small type it runs to about 120 pages. The text of the work is essentially compact summary of the articles cited in the bibliography Throughout, the basic knowledge is related to clinical medicine. Important changes and additions based on investigations published since 1934 have been incorporated in this edition.

KUNTZ, ALBERT

A text-book of neuro-anatomy Fourth edition thoroughly revised. Illustrated with 325 engravings. Philadelphia Lea & Febiger, 1945 478 p. illus. 24 cm. $6.50 685

Contents (abridged) Evolution and comparative anatomy of the nervous system. Topography of the central nervous system. The cerebrospinal pathway Morphology of the nerve cells. Interstitial tissue of the central nervous system. Myelinization. The cerebrospinal nerves. Internal structure of the spinal cord Peripheral and central spinal conduction pathways. The medulla oblongata. The pons. The mesencephalon. The cerebellum. The diencephalon. The visual apparatus. The autonomic nervous system. The cerebral hemispheres. The olfactory apparatus Structure of the cerebral cortex. Functions of the cerebral cortex. Laboratory outline. General neurological literature. Index.

Note (1787) A standard textbook for medical students who are beginning their study of this subject. Although the treatment emphasizes the anatomical aspects, the author stresses the importance of understanding the nervous system as dynamic organization; and to aid the student in arriving at this concept he has introduced considerable amount of physiological information. In this edition the length of the work has not been increased; nevertheless there has been *fair amount of rewriting. Material has been added* on such topics as cortical projection areas, connections of subcortical centers with the cerebral cortex, and the importance of these centers in the extrapyramidal projection system. Some changes in illustrations have been made.

METTLER, FRED ALBERT

Neuroanatomy Second edition. With 357 illustrations including 33 in color St. Louis The C. V Mosby Company 1948 536 p illus. (part col'd) 26 cm. $10.00 686

Contents Part I, Gross aspects of the neural system. The spinal cord and its surrounding media. The structures surrounding the brain. The cranial nerves and autonomic system. Topography of the brain. Association connections of the hemispheres. Interior of the hemispheres. Cerebellum. Midbrain, pons and medulla. General gross features of transverse sections. Part II, Microscopic anatomy of the neural system. The spinal cord. Microscopic anatomy of medulla oblongata. The pons. The mesencephalon. Sections through the thalamus and associated structures Morphology and physiologic mechanisms of the diencephalon and related structures. Cerebral cortex. List of selected references. Author index. Subject index.

Note (1789) A textbook for first courses offered in medical schools. The author has not attempted to give full account of the subject but has emphasized the fundamental material which he considers essential in clinical medicine, or as preparation for further study Special attention has been paid to terminology, all technical terms being defined when first introduced, and the BNA equivalents and alternative names included. In preparing the present edition the text of the original edition was not radically changed but numerous small revisions and amplifications were made. For example there is new treatment of the spinal mechanisms of micturition in the third chapter Considerable material on the blood supply and venous drainage which was not readily accessible in English has been added. There is new correlation of the subdivisions of the thalamus with the cerebral cortex. Twenty-one new illustrations were added and some older ones revised.

RANSON, STEPHEN WALTER

The anatomy of the nervous system Its development and function Revised by Sam Lillard Clark. Eighth edition with 417 illustrations, 14 in color Philadelphia W B Saunders Company, 1947 532 p illus (part col'd) 25 cm. $7 75 687

Contents (abridged) Origin and function of the nervous system. Gross anatomy of the nervous system. Meninges and blood vessels of the central nervous system. Histogenesis of the nervous system. Neurons and neuroglia. The spinal nerves. The autonomic nervous system. The spinal cord. The structure of the medulla oblongata. Internal structure of the pons. Internal structure of the mesencephalon. The cranial nerves and their nuclei. The cerebellum The diencephalon. The rhinencephalon. The cerebral cortex. Reflexes and reflex arcs. Clinical illustrations Sections of the brain. Methods of brain dissection. Bibliography Index.

Note A standard text for research workers and medical students which emphasizes the structural details of the nervous system in relation to their functional significance. In this revision the purpose and scope of the previous edition has been retained but some of the chapters have been rearranged. The gross descriptions of the nervous system are now grouped in one chapter The chapters on reflexes and clinical illustrations have been redesigned and expanded, and other sections have been revised to include the results of recent research. A sixteen-page bibliography is included.

RASMUSSEN, ANDREW THEODORE

The principal nervous pathways. Neurological charts and schemas with explanatory notes. Third edition. New York The Macmillan Company 1945 73 p. illus. 28 cm. $4.50 688

Contents Relations of the meninges to the brain, spinal cord, and cerebrospinal fluid. Neurological methods. Pain, temperature and light touch conduction. Tactile discrimination and deep sensibility Vestibular or equilibratory system. Auditory system. Binocular vision and reflexes through the midbrain. Localization of fibers from the retina to the visual cortex. Innervation of the eye. General visceral afferent system. Respiratory system. Gustatory system. Olfactory system. Corticobulbar and corticospinal (pyramidal) system Fiber connections of the corpus striatum (an extra pyramidal system) Chief afferent tracts, their relations to lower motor neurons and the final common path. Cranio-sacral division of the general visceral efferent system (autonomic or parasympathetic) Thoracico-lumbar division of the general visceral efferent system (sympathetic proper). Innervation of blood vessels Index.

Note (1797) In this established textbook, twenty-eight full-page diagrams, each with an accompanying page of explanatory text, portray and describe the principal neural structures and systems of the human body The volume is intended for medical students, and its arrangement into functional units is for the purpose of making this difficult subject both easier to comprehend and retain. Several alterations of the charts and text have been made in the third edition in order to incorporate the most recent studies.

STRONG OLIVER SMITH AND ADOLPH ELWYN

Human neuroanatomy Second edition. Baltimore The Williams & Wilkins Company 1948 442 p illus. (part col d) 26 cm. $6 00. 689

Contents General organization and significance of the nervous system. Development of the nervous system. The neuron. Neuroglia—the interstitial tissue of the nervous system. Histogenesis of the neural elements and their segmental distribution. The peripheral nerves and their ganglia. Peripheral terminations of afferent and efferent nerve fibers. The meninges of the central nervous system. The spinal cord. Segmental and peripheral innervation. The fiber

tracts of the spinal cord. The peripheral portions of the autonomic system. General considerations of the brain. The internal structure of the medulla. The internal structure of the pons. The mesencephalon. The cerebellum. The diencephalon and corpus striatum. The cerebral hemispheres. The cerebral cortex. The blood supply of the brain. Bibliography. Index.

Note: (1794) A textbook which is distinguished by detailed and well-illustrated expositions of neuroanatomy and by concise but useful summaries of information on functional and clinical aspects. It is based on the experience of many years of teaching at the College of Physicians and Surgeons of Columbia University. It is intended primarily for students, but is useful also to physicians who are not specialists in neurology. In this edition the former brief section on segmental innervation has been expanded to full chapter size, and the sections covering arterial and venous systems of the brain have been enlarged. Nineteen new illustrations have been included. There are now 334 figures. The bibliography refers to about 400 books and periodical articles.

HISTOLOGY

DAWSON HELEN LUCERNE

Lambert's histology an introduction and guide. Second edition. Philadelphia The Blakiston Company 1948 696 p illus. (part col d) 24 cm. $6 00 690

Contents (abridged) The cell. Epithelial tissues. Connective tissues—fibrous tissues—cartilage—bone. Blood. Muscular tissues. The nervous system. The vascular system. Lymphoid organs. The digestive system. Glands. Glands associated with the digestive tract. The respiratory system. The urinary system. The ductless glands. The skin and its appendages. The male reproductive organs. The female reproductive organs. The eye. The ear. Laboratory directions. References for suggested readings. Index.

Note. (1804) A standard textbook. The first edition, written by A. E. Lambert, was entitled *Introduction and guide to the study of histology for students in medical schools and colleges*. The purpose remains the same in this edition and the main contents of the book have not been extensively altered. However various portions have been rewritten to simplify them, helpful directions for the identification of unknown tissues have been inserted in the laboratory directions, and many new illustrations have been added. There are now 196 illustrations, of which 16 are in color

MAXIMOW ALEXANDER A., AND WILLIAM BLOOM

A textbook of histology Fifth edition, with 562 illustrations 32 in color Philadelphia W B Saunders Company 1948 700 p illus. (part col d) 26 cm. $8 50 691

Contents: Introduction. Epithelium. Blood. The connective tissue proper. Blood-forming and destroying tissues. Cartilage. Bone. Muscular tissue. The nervous tissue. The blood vascular system. The lymphatic system. The spleen. Glands. The endocrine glands. The skin. The oral cavity and associated structures. The teeth. Esophagus and stomach. The intestines. Liver, bile ducts, and gallbladder. Pancreas. The respiratory system. Urinary system. Male genital system. Female genital system. The mammary gland. The eye. The ear. Index.

Note: (1805) This text for medical students describes the minute structure of the body and the morphologic evidences of function. As much physiology, pathology and experimental zoology are included as assists in giving histology its proper relationship to the functioning organism as a whole. Basic facts are given in large type, and more detailed descriptions in smaller type. The general plan of the earlier edition has been retained but the adaptation of modern chemical and physical methods to histological problems has made necessary considerable revision. The chapter on bone has been completely rewritten, the section on protoplasm and its submicroscopic organization revised. Other changes appear in sections on the lung, on hemopoietic tissues, muscles, endocrine glands, female generative tissues, etc. Bibliographies are again included at the end of each chapter

SMITH, PHILIP E., AND WILFRED M. COPENHAVER

Bailey's text-book of histology Twelfth edition. Baltimore The Williams & Wilkins Company 1948 781 p. illus. (part col d) 23 cm. $7 00 692

Contents (abridged) The cell. General features of vertebrate development. Epithelium. The connective tissues. Blood and lymph. Muscle. Nervous tissue. The spinal cord, cerebellar cortex and cerebral cortex. The circulatory system. Lymphoid organs. The integument. Glands and the general structure of mucous membranes. The digestive system. The respiratory system. The urinary system. The male reproductive system. The female reproductive system. The endocrine glands. The organs of special senses. Index.

Note: (1798) A widely used, standard textbook. It is designed for first year medical and dental students, and for use in other colleges where a fairly comprehensive course in histology is given. A considerable amount of material from physiology is incorporated in order to give students a conception of tissues as parts of living organisms. In this edition a considerable number of illustrations are new and there are numerous small changes in the text. A few additions have been made to the selected bibliographies.

HUMAN EMBRYOLOGY

AREY LESLIE BRAINERD

Developmental anatomy a textbook and laboratory manual of embryology Fifth edition with 590 illustrations many in color Philadelphia W B Saunders Company 1946 615 p. illus. (part col d) 25 cm. $8.00 693

Contents: Part I, General development: Introduction. The sex cells. The discharge and union of sex cells. Cleavage and gastrulation. The fetal membranes of vertebrates. Human embryos and their membranes. Human placentation. Reproductive cycles and their hormonal control. Experimental embryology. Part II, Special development: External body form. The digestive system. The respiratory system. The mesenteries and coelom. The urogenital system. The vascular system. The skeletal system. The muscular system. The integumentary system. The central nervous system. The peripheral nervous system. The sense organs. Part III, A laboratory manual of embryology. The study of chick embryos. The study of pig embryos. Index.

Note (1733) A standard textbook for use in courses offered to pre-medical and medical students, and to other students who are preparing for professions where a thorough knowledge of embryology will be useful. The exposition centers around the development of man and mammals, comparative material being introduced chiefly where it supplements or explains better those conditions found in mammals. Functional and structural aspects are blended together. The author's chief aim, in revising the work for the fifth edition, was to reorganize and improve the first section on general development. Though considerable parts of the original text are still present, this section has been thoroughly rewritten. Changes in other parts are comparatively minor and are mostly due to new information which has been developed since 1940. One hundred eighty-six of the drawings are new and the lists of references have been revised.

CARNEGIE INSTITUTION OF WASHINGTON

Contributions to embryology Volume XXXI, nos. 198–206 Washington, D C. Carnegie Institution of Washington 1945 175 p illus. (part col d) 29 cm. (Carnegie Institution of Washington. Publication 557) Paper $4 50 cloth, $5.00 694

Contents: Index of authors, Volumes I–XXX, 1915–1942. A comparative study of the vaginal smear cycle of the rhesus monkey and the human, by Inês L. C. de Allende, Ephraim Shorr and Carl G. Hartman. Developmental horizons in human embryos: description of age group XIII, embryos about 4 or 5 millimeters long, and age group XIV, period of indentation of the lens vesicle, by George L. Streeter. Two human ova of the pre-villous stage, having a developmental age of about seven and nine days respectively, by Arthur T. Hertig and John Rock. Two human embryos showing early stages of the definitive yolk sac, by Chester H. Heuser, John Rock, and Arthur T. Hertig. A normal human ovum of sixteen days development (the Rochester ovum) by Karl M. Wilson. A pre-villous human ovum accidentally recovered from a curettage specimen, by Andrew A. Marchetti. Development, organization, and

breakdown of the corpus luteum in the rhesus monkey, by George W. Corner, Carl G. Hartman, and George W. Bartelmez. The differentiation of the phallus in the opossum and its reactions to sex hormones, by Robert K. Burns, Jr. The effects of male hormone on the differentiation of the urogenital sinus in young opossums, by Robert K. Burns, Jr.

—— Contributions to embryology Volume XXXII, nos. 207 to 212 Washington, D. C. Carnegie Institution of Washington, 1945 261 p. illus. (part col'd) 29 cm. (Carnegie Institution of Washington Publication 575) Cloth, $9.00 paper $8.50 695

Contents. Alkaline phosphatase in the ovarian follicle and in the corpus luteum, by G. W. Corner. The normal and experimental development of the mammary gland of the rhesus monkey with some pathological correlations, by H. Speert. Migration of the germ cells of human embryos from the yolk sac to the primitive gonadal folds, by E. Witschi. The development of the gonads in man with consideration of the role of fetal endocrines and the histogenesis of ovarian tumors, by J. Gillman. Developmental horizons in human embryos. Description of age groups XV, XVI, XVII, and XVIII, being the third issue of a survey of the Carnegie Collection, by G. L. Streeter. The development of the cranial arteries in the human embryo, by D. H. Padget.

Note: (1748) The technical papers bound in these volumes continue the series of the same title, which has been published since 1911. The papers report research in various branches of embryology. All are illustrated with plates, some with text drawings as well, and nearly all contain bibliographies.

DODDS, GIDEON STANHOPE

The essentials of human embryology Third edition. New York John Wiley & Sons Inc., 1946 314 p illus 22 cm. $4.00 696

Contents: The general principles of development. The germ cells. Ovulation, menstruation, and pregnancy. Early stages of human development. The development of the external form. The membranes and the placenta. The early history of the mesoderm. The supporting tissues and the skeleton. The muscles. The skin and associated structures. The alimentary system. The respiratory system. The body cavities. The heart and blood vessels. The lymphatic system. The blood cells. The urogenital organs. The nervous system. The sense organs. General notes on development. Index.

Note: (1809a) A concise textbook written primarily for students in medical colleges and secondarily for premedical students who are preparing for schools where embryology is a prerequisite. A knowledge of both gross and microscopic human or mammalian anatomy is assumed, and the book is designed to interpret and clarify that knowledge. In this edition, the aim and plan of the work are unchanged, but there has been considerable revision of the text. The *chapter on early development is new in this edition, and the sections* dealing with fetal membranes, the early mesoderm, respiration organs, body cavities, the blood vascular system, the lymphatics, the reproductive organs, and the organs of special sense have been rewritten. New illustrations have been added and older ones improved.

PATTEN, BRADLEY MERRILL

Human embryology With 1366 drawings and photographs grouped as 446 illustrations 53 in color Philadelphia The Blakiston Company 1946 776 p illus 25 cm. $8.00 697

Contents: Introduction. Reproductive organs; gametogenesis. Sexual cycle and fertilization. Cleavage, germ layers, and establishment of embryonic body. Early differentiation of the body and establishing of organ systems. Fetal membranes and placenta. Age, growth, and changes in external form of body. Twins; double monsters and teratology. Integumentary system. Connective tissues and skeletal system. The muscular system. Development of the nervous system. The sense organs. Development of the face and jaws and the teeth. Development of the digestive and respiratory systems. Body cavities and mesenteries. Ductless glands and pharyngeal derivatives. Development of the urogenital system. Development of the circulatory system. Bibliography. Index.

Note. A well-organized and -illustrated presentation specifically written for physicians and medical students. Relatively little space is given to theoretical and comparative aspects. Instead, fuller than usual treatments are given to aspects that are of special interest in medicine such as ovulation, formation of the embryo, changes in the female reproductive organs during pregnancy, development of systems of organs—with emphasis on the later stages—in the embryo, twinning, double monsters and other abnormalities. Many of the illustrations show sequences of developmental stages of organs and systems. The bibliography is not exhaustive but is very extensive and contains references on topics not treated in the book as well as on those that are discussed.

POTTER, EDITH LOUISE

Fundamentals of human reproduction. Illustrated by Alvin W. Meyer New York McGraw Hill Book Company, Inc., 1948 231 p. illus. 24 cm. (McGraw Hill series in nursing, Lucile Petry consulting editor) $3.50. 698

Contents (abridged) Part One, The background: The early forms of animal life. The general pattern of reproduction. The factors responsible for body form and the number of offspring. Part Two, The general plan. The sex organs and their function. The development of the blastocyst and the formation of the placenta. A survey of embryonic and fetal development. Part Three, Organ development: The brain and spinal cord. The stomach and intestines. The lungs. The spleen. The heart and blood vessels. The kidneys and urinary bladder. The glands of internal secretion. The face and sense organs. Part Four The infant. The birth and future life of the infant. Bibliography. List of visual aids. Index.

Note: A simplified but rather explicit introduction to human embryology. There are brief preliminary outlines of the evolution of the reproductive pattern in animals, and of the mechanism of *heredity. This material is followed by* a clearly-written account of the development of a human embryo and fetus up to birth. There are about 100 illustrations. The book is designed for students of nursing and for other readers who require a factual but non-technical knowledge of the subject.

PHYSIOLOGY

GENERAL

ADOLPH, EDWARD FREDERICK, AND OTHERS
Physiology of man in the desert, by E. F Adolph and associates, Department of Physiology University of Rochester New York Interscience Publishers, Inc., 1947 357 p. illus. 23 cm. (Monographs in the physiological sciences) $3.50 699

Contents Pictorial synopsis, by H. Rahn. Résumé of the investigation, by E. F Adolph and H Rahn. The human body and the desert, by E. F Adolph. Heat exchanges, sweat formation, and water turnover by E. F Adolph. Rates of sweating in the desert, by R. E. Gosselin. Heat exchanges in the desert, by R. E. Gosselin. Urinary excretion of water and solutes, by E. F Adolph. Fluid intakes in the desert, by A. H Brown Water requirements of man in the desert, by A. H. Brown. Water shortage in the desert, by A. H. Brown. Blood changes in dehydration, by E F Adolph. Blood circulation and temperature of men dehydrating in the heat, by A. Rothstein and E J Towbin Relative influence of heat, work, and dehydration on blood circulation, by A. H. Brown and E J Towbin. Dehydration exhaustion, by A H Brown Signs and symptoms of desert dehydration, by E. F Adolph Thirst, by E. F Adolph and J H. Wills Voluntary dehydration, by A. Rothstein, E. F Adolph, and J H. Wills. Survival without drinking water in the desert, by A. H. Brown. Water losses of men on life rafts, by A. H. Brown, R. E. Gosselin, and E F Adolph Men in the tropics compared with men in the desert, by O. W Molnar Life in deserts, by E. F Adolph. Summary and conclusions, by E. F Adolph and A. H. Brown. Selected references. Index

Note This book reports on extensive experimentation with human subjects conducted for three years in both desert and laboratory in a study conducted by the University of Rochester Medical School and the U S. Office of Scientific Research and Development. Physiological findings are tabulated meticulously and then interpreted, scientifically for the specialist and more empirically for the layman.

ANNUAL REVIEW OF PHYSIOLOGY Volume IX. Victor E. Hall, editor Stanford University Calif Annual Reviews Inc. and American Physiological Society 1947 736 p 23 cm. $6 00 700

Contents Growth by S P Reimann. Developmental physiology by A Tyler Reproduction, by G van Wagenen. Metabolic functions of the endocrine glands, by F D W Lukens The physiology of supporting tissue by P D F Murray Muscle by F Buchthal. Exercise by P V Karpovich The visceral functions of the nervous system, by W R Ingram Digestive system, by H. Greengard. Kidney by W Dock Peripheral circulation, by C J Wiggers. Heart, by S Rodbard and L N Katz Derivatives of blood plasma, by D J M Bard Blood gas transport, by D B Dill and W H Forbes. Water metabolism, by E. F Adolph Physiological effects of heat and cold, by A P Gagge and L P Herrington The respiratory system, by H C. Nicholson. Nerve and synaptic conduction by F Bremer Bioelectric potentials in the nervous system and in muscle, by H Grundfest Electrical activity of the brain, by M A. Lennox and W G Lennox. The somatic functions of the central nervous system, by C. N Woolsey Special senses, cutaneous sensation, by F K Sanders. The experimental neuroses, by H S Liddell. Permeability by W Wilbrandt Physiological aspects of genetics, by M R Irwin. Defense mechanisms, by W C Boyd and R. M Thiel. Pharmacology by C C. Pfeiffer and E. R. Loew Author index Subject index

Note (1811) The ninth in a series of annual volumes which had their beginning in 1939 The series is international in scope and is intended to present a résumé of significant developments in the field of physiology as reflected in the published literature of the subject. The papers comprising the volume have been contributed largely by American experts in the field but scientists from England, Denmark, Belgium, and Switzerland also are represented. Each paper concludes with an extensive list of references keyed to the textual material.

BARTLEY, SAMUEL HOWARD, AND ELOISE CHUTE
Fatigue and impairment in man. New York McGraw Hill Book Company Inc., 1947 429 p illus. 23 cm. $5.50 701

Contents Foreword, by A. C. Ivy Introduction. Various views on fatigue. Fatigue and allied concepts. Electrophysiological studies. Anoxia and related limiting conditions. Lack of sugar in the body as a limiting condition. Temperature extremes and water and salt lacks. Metabolism and nutrition. Conventional visual-fatigue studies. Hours and conditions of work in industry Drug action in relation to fatigue and impairment. Organization in neuromuscular activity Sleep and other periodicities. The long-term changes in the individual. Mental fatigue. Personal factors in the work situation. Visual performance and fatigue. Conflict and frustration. Chronic fatigue and related syndromes. Conclusions. List of visual aids. Author index. Subject index.

Note In this careful study the authors have summarized the findings of past researches on the subject of fatigue, explained fully how present points of view have been established and indicated some of the problems still in need of investigation. Considerable proof is offered to show that fatigue and impairment, properly considered, are by no means synonymous and not necessarily coexistent. The study is directed toward the specialist almost exclusively and will be of particular interest to the physiologist and the biochemist, although there is adequate treatment, as well, of the psychological aspects of the problem. Bibliographical footnotes are copious.

CARLSON ANTON JULIUS, AND VICTOR JOHNSON
The machinery of the body Third edition Chicago The University of Chicago Press 1948 639 p illus. 23 cm. $4.50 702

Content The science of physiology The unit of structure and function—the cell. Blood and the internal environment. The work of the heart. Blood flow and blood pressure. Mechanisms and functions of breathing The work of the alimentary canal. The history of foods in the body The action of muscle and nerve. Mechanisms of correlation—the spinal cord and brain. Sensory mechanisms. Chemical correlation—the glands of internal secretion. Body defenses against disease Reproduction and early development. Conclusion. Selected references Index.

Note (1812) An exceptionally good introductory book in physiology It is written at the college level, and is one of the "new plan" textbooks developed by the University of Chicago. In the present edition the scope and general plan of the book have not been changed, but revisions and additions have been made to incorporate significant knowledge gained since the first edition. Discussions of such subjects as blood transfusion, the new antibiotics, radioactive tracers, and new information on nutrition have been added. There have been some changes in the illustrations and also in the list of selected references at the end of the volume.

CURETON THOMAS KIRK JR. AND OTHERS
Physical fitness appraisal and guidance. By Thomas Kirk Cureton Jr assisted by Frederick W Kasch, John Brown and W G Moss. St. Louis The C. V Mosby Company 1947 566 p illus. (part col d) 26 cm. $6 00 703

Contents (abridged) Section I, The meaning of physical fitness and the history of the research to develop appropriate measuring instruments for its appraisal What is physical fitness? The search

for the best tests of physical fitness. Modern research on the validity and interrelationships of the physical fitness tests. Section II, Physique: Appraisal of body type as an approach to health and fitness guidance. Analysis of weight as basis for health and fitness guidance. Section III, Cardiovascular condition. Blood pressure tests of physical fitness. Rating cardiovascular condition by the heart-rate pulse wave tests. Physical fitness problems related to strenuous exertion. Section IV Respiratory fitness. Section , Motor fitness. Strength as an index of fitness. Analysis and prediction of all-out athletic performance. Section VI, Guidance: Principles of health and fitness guidance. Appendices: Supplementary bibliography Data on 1936 Olympic swimmers. Index.

Note: The purpose of this work is to describe and evaluate the methods which have been developed for measuring physical fitness. Much of the material is based on careful physical examination of first-year medical students at the University of Chicago, and on studies conducted by the Physical Fitness Research Laboratory at the University of Illinois. Considerable statistical data regarding the characteristics of various body types are included, and specific tests and their required equipment are described in detail. The book is intended primarily for use by advanced and graduate physical education students, but it will also be of interest to school physicians, nurses, physical education directors, and others concerned with physical fitness programs.

McMaster, Philip Duryee and others

Lymph. New York The New York Academy of Sciences 1946. 203 p. illus. 23 cm. (New York Academy of Sciences. Annals. Vol. 46 p 679–882 1946) Paper $2 75 704

Contents Introduction by P D McMaster Functional activity of the blood capillary bed, with special reference to visceral tissue, by R. Chambers and B. W Zweifach. Blood circulation in the subcutaneous tissue of the living bat's wing, by P A. Nicoll and R. L. Webb. Capillary permeability and the factors affecting the composition of capillary filtrate by E. M. Landis. Intercellular substance in relation to tissue growth, by E. R. Clark. Conditions in the skin influencing interstitial fluid movement, lymph formation, and lymph flow by P D McMaster The significance of lymphatic blockade in immunity by V Menkin Extravascular protein and the lymphatic system, by C. K. Drinker The role of the lymphocyte in the circulation of the lymph, by W E. Ehrich. The role of lymphocytes in normal and immune globulin production, and the mode of release of globulin from lymphocytes, by A. White and T F Dougherty

Note: The papers comprising this volume were presented at conference held under the auspices of the New York Academy of Sciences in April, 1945. Each paper discusses an aspect of the subject which is currently of interest and in which, in most cases, the paper's author has conducted original research. Each paper is supplemented by bibliography and, in some cases, discussion by members of the conference. There is no index.

Putnam Tracy Jackson and others

The physico-chemical mechanism of nerve activity New York The New York Academy of Sciences, 1946 375–602 p. illus. 23 cm. (New York Academy of Sciences. Annals. Vol. 47 p 375–602 1946) Paper $3 00 705

Contents: Introduction to the conference on nerve activity by T. J. Putnam. The membrane theory by R Höber Chemical mechanism of nerve activity by D. Nachmansohn. An electrical hypothesis of synaptic and neuro-muscular transmission by J. C. Eccles. Chemical excitation of nerve by F Brink, Jr. and others. Electrical characteristics of electric tissue, by R. T Cox and others. Some basic aspects of the activity of electric plates, by A Fessard. Physiological function from the standpoint of enzyme chemistry by D. E. Green. Cholinesterase, by O. Bodansky The effects of drugs on nerve activity by A. Gilman. The recovery of diameter and impulse conduction in regenerating nerve fibers, by C. M. Berry and J. C. Hinsey Nerve metabolism and function, by R. W Gerard. Conclusion, by J F Fulton.

Note: The discussions and critical evaluation of the various theories relating to the physiology and mechanism of nerve activity contained in these papers were presented originally at conference held in February 1946 under the auspices of the New York Academy of Sciences. Both the chemical and physical aspects of the subject are considered with special attention given to the role attributed to the acetylcholine system. Each paper has been prepared by leading authority and investigator in this particular field, and new hypotheses and information, based on these investigations, are advanced. Brief bibliographies are included.

Sandow, Alexander

The effect of activity on the latent period of muscular contraction. New York The New York Academy of Sciences, 1945 32 p illus. 23 cm (New York Academy of Sciences. Annals Vol. 46 p 153–184 1945) Paper $0.50 706

Contents Introduction. Method. Results: Effect of single tetanus. Effect of series of tetani. Effect of series of twitches. Localization of the source of the latency response changes. Correlation of the L_r with pH changes caused by activity Discussion. Summary Literature cited.

Note The research reported in this monograph deals with the effect of muscular activity on that phase of the contractile response which occurs between the instant of application of the stimulus and the instant at which tension development first appears. A piezoelectric cathode-ray oscillographic technique developed by the author for use in this type of study is described in detail.

Sandow, Alexander, and others

Muscular contraction New York The New York Academy of Sciences, 1947 266 p illus. 23 cm. (New York Academy of Sciences. Annals Vol. 47 p 665–930 1947) Paper $3.00 707

Contents Introduction to the conference by A. Sandow Part One, Dynamics: Dynamics of single muscle fibers, by R. W Ramsey The time course of tension development in the muscle response, by A. S. Gilson, Jr and others. Muscular contraction and rubberlike elasticity by E. Guth. Membrane changes during excitation and inhibition of the contractile mechanism, by S. W Kuffler. Part Two, Ultrastructure: Birefringence and ultrastructure of muscle, by E. Fischer Electron microscope and X-ray diffraction studies of muscle structure, by F O. Schmitt and others. Part Three, Chemistry The main chemical phases of the recovery of muscle, by O. Meyerhof. Chemical processes of oxidative recovery by S. Ochoa. Part Four Mechano-chemical coupling: Intracellular inorganic ions and muscle action, by H. B. Steinbach The interaction of myosin and adenosinetriphosphate, by Shih-Chang Shen. Latency relaxation and theory of muscular mechano-chemical coupling, by A. Sandow

Note. A collection of papers prepared by noted physiologists, chemists, physicists, and medical scientists, presented originally at conference held in February 1946 under the auspices of the New York Academy of Sciences. Based on the authors' investigations and on review of the literature of the subject, the papers provide an integration of modern knowledge regarding the phenomenon of muscular contraction. New experimental results and theoretical approaches are discussed and earlier findings critically evaluated. Gaps in present day knowledge are indicated as means of stimulating and suggesting future lines of research. Bibliographies are included.

Scheer, Bradley Titus

Comparative physiology New York John Wiley & Sons, Inc., 1948 563 p illus. 22 cm. $6.00 708

Contents: The physiology of animals. Protozoa. Multicellular acoelomate animals. Mollusca. Annelida. Arthropoda (Crustacea and *Limulus*) Arthropoda (Insecta) Echinodermata. Vertebrata (vegetative functions) Vertebrata (animal functions) Summary Appendix. Species index. Subject index.

Note A compact survey of the current knowledge of the physiology of the animal phyla named in the contents. Although designed for use in advanced college courses in comparative physiology the scheme of organization may hinder somewhat its use as textbook but does make the book useful as reference manual and guide to the literature. The author states that more than one thousand original papers were consulted in the course of the book's preparation. Keyed references to the literature are included in the text. Rather abbreviated citations are given in the footnotes. The author has assumed that his readers will be familiar with basic physics, chemistry and zoology

Turner, Clarence Donnell

General endocrinology Illustrated. Philadelphia W B Saunders Company 1948 604 p illus. 24 cm. $6 75 709

Contents: Introduction. The biology of secretion. The thyroid gland. The parathyroid glands. The pancreas. The gastrointestinal principles. The adrenal glands. The biology of sex and reproduction. Physiology of the testis. Physiology of the ovary. The hormones in pregnancy and lactation. The pituitary gland. Endocrine mechanisms in the invertebrates. Index.

Note Although written as a textbook, this work is a valuable contribution to the literature of endocrinology because of its treatment of the subject as a field of biology rather than as a branch of medicine. Human endocrinology is emphasized, but related mechanisms in other animals and also in plants are included in the book's scope. The chapters on the individual glands describe their anatomic features, physiology and selected clinical manifestations. Special attention is given to experimental methods of investigation. The book is written in monograph style with keyed references from the text to the very extensive chapter bibliographies. It is suitable for advanced undergraduate students, graduate students, and for scientists who are not specialists in this field but need a reliable survey of it and the related literature.

TEXTBOOKS

AMBERSON, WILLIAM RUTHRAUFF AND DIETRICH C. SMITH

Outline of physiology Illustrations by the late Norris Jones and William Loechel. Second edition. Baltimore The Williams & Wilkins Company 1948 502 p illus. (part col d) 26 cm. $5.00 710

Contents (abridged) Section I, The living cell The method and scope of physiology The electrolytes of living cells and tissues. Organic constituents of living cells and tissues. Section II, Basic phenomena of life: Catalysis and enzymes. Oxidation and reduction. Organic synthesis. The vitamins. Animal electricity Muscular contraction. Section III, Nervous integration of physiological function The nerve impulse. Sensations of the body Reflex pathways in the brain. Nervous control of posture and movement. Section IV Circulation, respiration and metabolism The heart. Nervous and chemical control of circulation. The transport of the respiratory gases. Metabolism and temperature regulation. Section V Digestion and excretion Chemical regulation. Secretion of digestive juices. Absorption in the digestive tract. The functions of the kidney Section VI, The endocrine glands and reproduction. Index.

Note: (1817) A textbook for introductory courses offered to college students. The authors have endeavored to make the subject interesting and easy to understand, and to these ends have included considerable historical material and have made their discussions of phenomena relatively full. However their treatment is not an oversimplification. The book is suitable for students who are planning to prepare for professional work in physiology medicine, or general biology This edition contains several new chapters on topics that were not covered in the original edition, and there are other significant changes. No references to the literature are included.

BEST CHARLES HERBERT AND NORMAN BURKE TAYLOR

The physiological basis of medical practice a University of Toronto text in applied physiology Fourth edition. Baltimore The Williams & Wilkins Company 1945 1169 p illus. (part col d) 26 cm. $10.00 711

Contents (abridged) Section I, The blood and lymph The physiological properties, physical characters and composition of blood. The lymph and tissue fluids. Transfusion—blood groups. The spleen—the life of the red cell—the regeneration of blood. The anemias. The mechanisms regulating the reaction of the body fluids. Section II, The circulation of the blood The dynamics of the circulation The arterial blood pressure. The velocity of the blood. The physiology of cardiac muscle. The origin and mode of transmission of the heart beat Electrocardiography—the venous pulse. The regulation of the heart' action. The output of the heart. Special features of the circulation in different regions. Section III, Respiration The air of the lungs. The physical principles governing the respiratory exchanges. The transport and delivery of oxygen to the tissues. The carriage of carbon dioxide by the blood. The control of respiration. Section IV The secretion of urine Section Digestion The salivary glands and the secretion of saliva. Gastric digestion. Digestion in the intestine. The gall-bladder and bile ducts. The movements of the alimentary canal. Visceral sensations. Section VI, Metabolism and nutrition General metabolism. The metabolism in starvation (fasting) obesity and undernutrition. Metabolism in muscular activity The body temperature—heat balance. The vitamins. Section VII, The ductless glands or endocrines. Section VIII, The nervous system The physiological properties of nerve. Reflex action. The physiological mechanisms governing posture and equilibrium. The spinal cord and brain stem (medulla, pons and mid-brain) The cerebral cortex—the physiology of speech and some of its disorders. The cerebellum. The cerebrospinal fluid. Section IX, The special senses: The physiology of vision. The ear. The chemical senses. References. Index.

Note (1831) A standard, almost encyclopedic treatment of physiological and biochemical principles and techniques from the standpoint of their application to clinical medicine. It is designed for students and practitioners of medicine rather than for chemists or physiologists, and its primary purpose is to encourage the correlation of clinical practice with the underlying physiological knowledge. In the present edition the type has been reset, and the book is now printed in smaller type with two columns to the page. The total number of pages has been substantially reduced, but the text is no shorter. A number of the older illustrations have been redrawn or entirely replaced, and there are numerous brief revisions and additions throughout the text. A few references have been added to the bibliography

FULTON JOHN FARQUHAR, editor

Howell's textbook of physiology Edited by John F Fulton with the collaboration of Donald H. Barron John R. Brobeck, Robert W Clarke George R. Cowgill, William U Gardner David I. Hitchcock, Harold Lamport, David P C Lloyd, Leslie F Nims Theodore C. Ruch. Fifteenth edition, illustrated. Philadelphia W B Saunders Company 1946 1304 p illus. (part col d) 24 cm. $9.00. 712

Contents (abridged) Historical background of American physiology by J. F Fulton. Part I, Principles of nervous and muscular activity by D P C. Lloyd. Energy transformations in muscle, by A. K. Wilhelmi. Part II, The central nervous system—motor functions, by J F Fulton. Autonomic nervous system—peripheral division, by R. O. Greep. Part III, The nervous system—sensory functions, by T C. Ruch. Olfaction and olfactory pathways, by H. D Patton. The eye as an optical instrument, by F W Weymouth. Part IV Properties and constituents of the blood, by D. I. Hitchcock. General properties of blood—the formed elements, by J H. Ferguson. Coagulation of blood, transfusion problems in hemorrhage and shock, by J. H. Ferguson. Part Physiology of the organs of circulation of the blood and lymph, by D. H. Barron, H Lamport, and J F Fulton. The capillaries and the lymphatics, by E. Ponder. The pulse by W F Hamilton. Events of the cardiac cycle, by H. E. Hoff. The nutrition of the heart, by H. E. Hoff. Circulation through special regions, by W F Hamilton. Part VI, Respiration, by L. F Nims. Organization of the neural mechanisms responsible for rhythmic respirations, by R. F Pitts. Part VII, Body fluids and kidney by R. W Clarke. Physiology of body fluids, by J. R. Elkinton. Part VIII, Physiology of digestion and secretion of the alimentary tract, by G. R. Cowgill. Part IX, Metabolism and nutrition, by J. R. Brobeck. Part X, Physiology of reproduction, by W U Gardner Reproduction in the male, by C. W Hooker. Genetic aspects of physiology by W Landauer Index.

Note: (1834) Primarily a textbook for medical students and advanced groups in physiology this classic work is useful to anyone whose interests or profession requires a detailed compendium of the current knowledge of physiology In this edition the work has been systematically and thoroughly revised. Each of the ten main sections was placed in charge of an associate editor who wrote part of the section himself and also, in most cases, assigned portions of it to other authorities. There are 200 more illustrations in the new edition than in the preceding one and 212 more pages of text. Changes in the sections vary from mere additions of material to the older text to complete rewriting and, in effect, the substitution of a new paper for the older one. Most of the chapters include a selected list of references. A new edition was scheduled for publication in 1949

MITCHELL, PHILIP HENRY

A textbook of general physiology Fourth edition. New York McGraw Hill Book Com-

pany Inc., 1948 927 p illus. 23 cm. (McGraw Hill publications in the zoological sciences, A. Franklin Shull, consulting editor) $7.50 713

Contents: Excitation and inhibition. Physiology of contraction. Functional units of nervous systems—neurones and protoneurones. Reflexes and tropisms. Correlating action of the nervous system. Receptors. Organic constituents of living matter. Inorganic constituents of living matter. Biological significance of water and other electrolytes. Physiological significance of hydrogen and hydroxyl ions. Surface action. The colloidal state. Physicochemical structure of living matter. Diffusion and osmosis, osmotic pressure. Permeability of membranes and living cells. Synthetic processes in plants and animals. Catalysis and enzymes. Digestion. Chemistry of the blood and lymph. Circulation of the blood. Respiration. Physiological oxidations—animal heat regulation. Intermediary metabolism. Excretion. Nutritional requirements. Chemical regulation by the internal secretions. Index.

Note: (1834) A standard textbook which has been used in American colleges since 1923. The work is designed for beginners in the subject who have had introductory courses in college biology, physics, and general chemistry. Emphasis is placed on physiological processes rather than on the physiology of organs. Changes in the work in this edition reflect recent advancements in the science, particularly in those parts concerned with excitation and contraction, the structure of living matter, cell permeability, nutrition, intermediary metabolism, biological oxidation, and the functioning of vitamins and hormones. A *Laboratory manual of general physiology* by the author and R. Taylor. New York McGraw-Hill Book Company 143 p., $1.75, is intended for use with this book.

SCHNEIDER EDWARD CHRISTIAN, AND PETER V KARPOVICH

Physiology of muscular activity Third edition illustrated. Philadelphia W B Saunders Company 1948 346 p. illus. 22 cm. $3 75 714

Contents (abridged): Skeletal muscle. The fuel for muscular work. Work, energy and mechanical efficiency. Respiration. Blood composition and transportation of gases. The arteries and arterial blood pressure. The capillary circulation, venous blood pressure and the venous return. Fatigue and staleness. Physical work in relation to external temperature. Relation of body type and posture to physical fitness. Physical activity for convalescents. Ergogenic aids in work and sports. Bibliography. Index.

Note: A college text for students of physical education. It presumes some knowledge of physics and chemistry and of human anatomy and physiology. Primarily concerned with the changes in body metabolism due to exercise, physique, and diet, the authors discuss on the basis of physiology such topics as food energy relationships, the effects of drugs and chemicals, and of exercise and training on the human body. This edition has been considerably revised: the last two chapters are new additions; and a 128-entry bibliography is also included.

ZOETHOUT, WILLIAM DOUWES AND W W TUTTLE

Textbook of physiology Ninth edition. With 304 text illustrations and six color plates. St. Louis The C. V Mosby Company 1946 723 p illus. (part col'd) 22 cm. $4 75 715

Contents (abridged): Protoplasm and its processes. Enzymes or ferments. The tissues. Contractility—muscle physiology. Conductivity—nerve physiology. Blood—the middleman. The mechanical factors of blood circulation. Gas exchange—respiration. Digestion. Protein metabolism. Carbohydrate and fat metabolism. Water and mineral metabolism. Hormones or internal secretions. Renal secretion. The skin. The brain. The autonomic nervous system. Reproduction. Glossary. Index.

Note: (1818c) A long-established textbook which is used in introductory courses offered to students who are preparing for professional work in such fields as dentistry and pharmacy. It is intermediate in comprehensiveness and difficulty between the elementary texts designed for general college courses and the full treatments written primarily for medical students. There has been a fair amount of revision in both the text and illustrations in preparing this edition. A tenth edition was scheduled for publication in 1949.

NUTRITION AND FOOD

CHRISTENSEN RAYMOND PETER

Efficient use of food resources in the United States. Washington D C. Government Printing Office, 1948 98 p. illus. 23 cm. (United States Department of Agriculture. Technical bulletin no 963) Paper $0.25 716

Contents: The long-term food problem. Food needs for better nutrition. Changes in food production. Relative efficiency of products as sources of food nutrients. Food production and consumption ahead. Future adjustments in farm production. The meaning of it all. Literature cited. Additional tables.

Note: The central question under study in this bulletin is what adjustments in production and consumption of food products would be necessary in the immediate future to provide better diets and at the same time to satisfy tastes and preferences as fully as possible. Although the analysis made is confined to the United States, the general approach is applicable to food problems in other countries.

GILBERT FRANK A.

Mineral nutrition of plants and animals. Norman, Okla. University of Oklahoma Press, 1948 131 p illus. 23 cm. $2 75 717

Contents: Introduction. Early history of plant nutrition. Classification of the elements used in nutrition. Phosphorus. Calcium. Magnesium. Potassium. Sulfur. Iron. Copper. Cobalt. Manganese. Zinc. Iodine. Boron. Molybdenum. Aluminum. Silicon. Sodium and chlorine. Fluorine. Arsenic, lead, and selenium. Human nutrition. Bibliography. Index.

Note: The purpose of this volume is to provide a comprehensive yet concise review of the essential facts regarding the relation of microelements to nutrition and the mineral requirements of plants and animals. Each mineral or element is discussed on the basis of its nutritive functions, its occurrence in the soil, and its deficiency effects in plants and animals. The book is based on a survey of the more important literature of the subject and the references cited throughout the text are keyed to a sixteen-page bibliography. The author is a member of the Agricultural Sciences Research Division at Battelle Memorial Institute.

HORWITT, MAX KENNETH AND OTHERS

Investigations of human requirements for B-complex vitamins by M K. Horwitt, E. Liebert, O Kreisler, and P Wittman, with the supervision of the Committee on Nutritional Aspects of Ageing, Food and Nutrition Board, Division of Biology and Agriculture. Washington, D C. National Research Council, 1948 106 p. illus. 26 cm. (National Research Council. Bulletin no 116) Paper $1.00 718

Contents: Introduction. Description of procedure, by M. K. Horwitt. Biochemical observations, by M. K. Horwitt. Clinical observations, by O. Kreisler. Neurological observations, by E. Liebert. Psychological observations, by P. Wittman. Summary and general conclusions, by R. D. Williams and others.

Note: A detailed report of an experiment carried out to determine the effects of liberal versus moderately restricted allowances of B-complex vitamins on the mental and physical status of individuals.

MACY ICIE GERTRUDE, AND HAROLD H. WILLIAMS

Hidden hunger New York The Ronald Press Company 1945 286 p illus. 24 cm. $3.00 719

Contents: The science of nutrition. Nutrition at the human frontier. Choosing and using nutriments. Poor nutrition—poor health. Nourishment from the soil. The substance of life. Food—as eaten. Food in action. Food for work. Food to fight. Food for thought. References.

Note This account of present-day knowledge regarding the science of nutrition and of the part played by proper diet in the life of the individual and the nation, is written in manner which will appeal to the educated lay reader. The authors stress the fact that an abundance of food does not necessarily imply good nutrition, and on this basis discuss the various types of food which are essential to good health and general well-being. They describe the digestive process and show how lack of one or more essential minerals or vitamins results in undernourishment and disease. The book is essentially an argument for the belief that optimal nutrition for everybody is nal step in curing the ills of the world.

MACY, ICIE GERTRUDE, AND OTHERS

Nutrition and chemical growth in childhood. Volume II Original data with a foreword by Lawrence Reynolds, and a supplement by Julia Outhouse Holmes. Springfield Ill. Charles C Thomas 1946 1460 p illus. 24 cm $10 00 720

Contents (abridged) Introduction. Data for normal children, obtained by the Research Laboratory of the Children's Fund of Michigan. Data for normal children, obtained by the Department of Home Economics, Agricultural Experiment Station, College of Agriculture, University of Illinois. Addenda: Comparative values for abnormal children, obtained by the Research Laboratory of the Children's Fund of Michigan Osteopoikilyrosis. Ununited fracture. Lipoma. Hematochemical studies of the blood in health and disease. Epilepsy Index: Subjects and names, Volumes and II.

Note (1331a) A clinical, chemical, psychological, anthropometric and roentgenologic study of diet-controlled group of normal children. Each child was repeatedly measured and tested over period of six or seven years in order to record the anatomical and physiological changes due to growth. The work was carried out in great detail, for example, measurements were made of the individual's positive mineral intake and of the resulting quantitative presence of these minerals in the urine and feces. Hundreds of roentgenograms, most of which show skeletal changes, are reproduced as illustrations in the present volume. Volume of the work deals mainly with measurement techniques and is described in the original volume of *Scientific medical and technical books*. A third volume that will interpret the collected data and results of the study is planned.

NATIONAL RESEARCH COUNCIL. FOOD AND NUTRITION BOARD

Recommended dietary allowances. Revised 1948 Washington D C. National Research Council, 1948 31 p 25 cm. (Its Reprint and circular series no 129) Paper $0 25 721

Note A carefully-formulated statement of the food elements, and their quantities, which appear to be essential in adequate diets. The heart of the work is table of recommended daily allowances of protein, calcium, iron, vitamin A, thiamine, riboflavin, niacin ascorbic acid vitamin D and also of total food intake expressed in calories. This table is supplemented by concise discussions which are essentially critical appraisals of the most significant literature, by typical menus, and bibliography The work represents consensus f outstanding contemporary authorities The first edition was published in 1943 second edition was published in 1945 and the third in 1948. Each new edition is based on new examination and appraisal of the literature and accumulated evidence.

RORTY JAMES AND N PHILIP NORMAN

Tomorrow's food the coming revolution in nutrition. Foreword by Stuart Chase. New York Prentice-Hall Inc., 1947 258 p. 21 cm. $3.50 722

Contents (abridged) I. The quest for health II. What's wrong with American food? The lesson of the draft rejections. Better food makes better babies. Food and the safety process. American bread is enriched. Sugar: bottleneck of stunted policy Milk, butter and margarine Where do our food habits come from? III. The tools of Liberation Agricultural heretics and evangelists. W can double our food production. The revolution in food processing. Streamlining distribution and labeling. IV The consumer's job—putting the tools to work Food, planning, and the scientist. How about free food? Taking hunger out of history—the global task. Appendices: How to eat sensibly without vitamin charts. Bibliography of recommended books. Index.

Note. A condemnation of the use of over-refined processed foodstuffs and plea for sound, sensible diet of natural foods. Critical examination is made of the big business and social aspects of this problem, and of such fads as "enriched" bread, vitamin pills, calorie counts, etc. The effects of various foodstuffs on animals and human communities are described, and throughout the book emphasis is placed on the sites, in terms of health and disease-resistant bodies, of well-rounded diet. Although the treatment is popular the data on hich it is based are scientifically sound.

SAHYUN MELVILLE, editor

Proteins and amino acids in nutrition New York Reinhold Publishing Corporation 1948 566 p illus. 23 cm. $7 50 723

Contents: Introduction, by Howard B. Lewis. Proteins in nutrition (historical) by Eliot F Beach. The biological utilization of proteins and protein requirements, by H. H. Mitchell. Caloric, vitamin and mineral requirements with particular reference to protein nutrition, by Harry J. Deuel, Jr Economic aspects of food proteins, by Lela E. Booher The nutritive aspects of meat and meat products, by H. R. Kraybill. The amino acid requirements of avian species, by H. J. Almquist. The relation of hormones to protein metabolism, by Abraham White. Plasma proteins and their relation to nutrition, by Melville Sahyun Protein deficiency and its relationship to nutritional anemia, hypoproteinemia, nutritional edema, and resistance to infection, by Clarence P Berg. Protein and amino acid utrition in pediatrics and in pregnancy by S. Z. Levine. Protein utrition in surgical patients, by Charles C. Lund and Stanley M. Levenson. The relation of fluid and mineral balance to protein metabolism, by William E. Abbott. Proteins as related to burns, by Alfred Large and Charles G. Johnston. The protein nature of toxins, antitoxins and related substances, by Elvin A. Kabat. Protein nature of filtrable viruses, by Max A. Lauffer Appendix: Table 1, Proximate composition of American food materials. Table 2 Nutritive value of 100 grams of selected foods, edible portion. Index.

Note The common theme of these papers is the effects of varying amounts of protein (including amino acids and accompanying food components) in the diet of human beings. Many interesting correlations are indicated of the close connection between poor nutrition (especially protein deficiency) and various illnesses. Of the many tables, two in Chapter 10 (Tables 10–10 and 10–11) suggest direct correlation between the protein diet of pregnant women and the resultant height, weight, and general health of their offspring. Another table, 13 pages long, tabulates the water protein, fat, carbohydrate, ash, acid, and fuel value of long list of American food materials. The work is designed primarily for professional workers in nutrition and allied fields Extensive references are given at the end of each chapter

SELLING LOWELL SINN AND MARY ANNA S FERRARO

The psychology of diet and nutrition. New York W W Norton & Company Inc., 1945 192 p. 21 cm. $3 00 724

Contents: The basic psychology of nutrition. Food habits, fads, customs, and aversions Children's feeding problems. Feeding problems due to psychological maladjustments. The dietary significance of mental disorders. Food and nutrition as they affect the home. Mental-hygiene techniques applied to the feeding of large groups. The special psychology of the patient on diet. The effect of improper diet on behavior and personality Educating the food consumer Index.

Note. A dietitian and psychiatrist have here collaborated to provide this brief outline of present-day knowledge regarding the relationship between nutrition and psychological problems. The authors discuss the role of diet in mental therapy and show how various eating habits affect the behavior and personality Although written primarily for the clinical dietitian and other persons responsible for the proper feeding of groups of people the ideas presented are of interest also to the general reader.

SHERMAN HENRY CLAPP

Calcium and phosphorus in foods and nutrition New York Columbia University Press 1947 176 p. illus. 22 cm. $3.00 725

Contents Background of the calcium and phosphorus problems of nutrition. Calcium in the body Effects of food and growth upon

the calcium content of the body Chemical forms and nutritional functions of phosphorus in the body Calcium and phosphorus requirements; the problem of necessary and optimal intakes. Foods as factors in the nutritional provision of calcium and phosphorus. Summary and suggestions. Selected bibliography Index.

Note: Much has been learned in recent years about the importance and functions of calcium and phosphorus in animal nutrition. Although many questions requiring further investigation remain, a survey of current knowledge and a guide to the literature has been needed. Such a statement and guide are at hand in this relatively short work which deals both with the quantitative distribution of calcium and phosphorus in the body and in foods, and with the nutritional functions of these elements The bibliography although a selected one, contains approximately 300 citations. The discussion is intended for advanced students and professional workers in nutrition and dietetics.

SHERMAN HENRY CLAPP

Chemistry of food and nutrition. Seventh edition. New York The Macmillan Company 1946 675 p illus. 22 cm. $4.50 726

Contents (abridged) General introduction. Carbohydrates. Fats and lipoids—lipids (lipins) Nutritional chemistry of the proteins and their amino acids. Enzymes and digestion. The fuel value of food and the energy requirement of the body Quantitative aspects of protein needs and values. Mineral elements in foods and nutrition. Nutritional aspects of acid-base balance. Quantitative aspects of calcium and phosphorus needs and values. Iron and copper in food and nutrition. Ascorbic acid—vitamin C. Thiamine—vitamin B_1. Riboflavin. Niacin (nicotinic acid) and the pellagra problem. Other water-soluble vitamins and substances of related interest. Vitamin A and its precursors. The vitamins D. Other fat-soluble vitamins. The nutritional chemistry of reproduction and lactation. Dietary adequacy and nutritional status Nutritional characteristics of the chief groups of food. Causes and extent of variations in the nutritive values of foods. Food economics in the light of the newer chemistry of nutrition. Appendices: Factors for calorific values of various materials when burned in oxy-calorimeter Proximate composition and energy values of foods. Mineral elements in foods. Vitamin values of foods. Simple statistical treatment of the data of nutrition investigations. Index.

Note: (1859a) Although designed primarily as a college textbook, this standard work has become of increasing value to general readers who are interested in the facts regarding the relation of nutrition to health and efficiency It is useful also as a guide to the literature of nutrition. In this edition there are two new chapters several of the older chapters have been revised and expanded, and the lists of suggested readings have been revised.

SHERMAN HENRY CLAPP

Food and health. New edition completely revised and reset. New York The Macmillan Company 1947 290 p. illus. 22 cm. $4.50. 727

Contents (abridged) The importance of an intelligent use of food. How foods affect health and efficiency through nutrition. The control of body weight, and the maintenance of health during undernutrition. Energy needs in childhood and with advancing age. Proteins and their amino acids Mineral elements in food and nutrition. The significance of food calcium in development and health. Vitamin A and its precursors Thiamine (vitamin B_1) Riboflavin (vitamin B_2 or G) Pellagra and niacin (nicotinic acid) Ascorbic acid (vitamin C) The vitamins D and the prevention of rickets. The existence of other vitamins and the concept of foods and dietaries as wholes. The chief groups of foods and the place of each in the diet—breadstuffs and cereals—vegetables and fruits—milk and cheese—meats, fish, poultry and eggs—fats—sugars and sweets—summary Adjustments for better nutrition. Appendices: Recommended dietary allowances (revised 1945) of the National Research Council. Nutritive values of typical foods Nutritional calories in common servings and commercial units of a larger number of typical foods. Selected bibliography Glossary Subject index.

Note: An authoritative and well-written book for general reading. It presents the modern knowledge of nutrition and points the way to selecting food and planning everyday diets so that an optimum level of health and vitality will be maintained. Although little space is given to menu planning, an appendix contains three representative series of meals that were chosen according to the principles explained in the book. The first edition was published in 1934 In the present edition there has been much revision in order to incorporate the knowledge gained since 1934 There are five new chapters, and the bibliography has been thoroughly revised.

SHERMAN, HENRY CLAPP

Foods their values and management. New York Columbia University Press 1946 221 p $21\frac{1}{2}$ cm $3 25 728

Contents: Modern views of food supply Grain crops as food and feed. Mature legumes and nuts. Potatoes and sweetpotatoes. Green and yellow vegetables. Citrus fruits and tomatoes. Other (and total) fruits and vegetables. Milk and its products other than butter. Meats, fish, poultry and eggs. Food fats. Sugar and sweets. Food adjustment problems. Appendix Recommended dietary allowances. Bibliography Index.

Note: A companion to *The science of nutrition* by the same author It is intended for the general reader as well as for specialists. In the discussion of each article (or type) of food its place in the individual or family dietary or in the national food supply is considered from the viewpoint of its contribution to each main aspect of nutritive value energy protein, mineral elements, and vitamins. Special attention is given to new knowledge of the distribution and conservation of vitamin values and to the amounts of individual amino acids in the different food proteins. Although the bibliography is a selected one and is chiefly limited to recent publications, it runs to thirty-two pages.

SHERMAN HENRY CLAPP

Selected works of Henry Clapp Sherman, Mitchill Professor Emeritus of Chemistry, Columbia University New York The Macmillan Company 1948 1056 p. illus. 24 cm. $5 00 729

Contents: Looking forward in nutrition, by Henry C. Sherman. In appreciation. Biographical notes. Chronological list of papers. Books. Acknowledgment. Selected reprints: Foods and nutrition. Addresses and reviews.

Note Henry Clapp Sherman, former professor of chemistry at Columbia University is world-famous for his outstanding work and research in all the major branches of the science of nutrition. This volume contains biographical material, a bibliography of his writings, and 119 of his articles, reprinted from various scientific journals, ranging in date of publication from 1900 to 1946. Unfortunately the volume lacks an index.

UNITED STATES. PLANT, SOIL AND NUTRITION LABORATORY

Factors affecting the nutritive value of foods studies at the U S Plant, Soil, and Nutrition Laboratory Prepared by the staff of the U S Plant, Soil and Nutrition Laboratory Ithaca, N Y Washington, D C. Government Printing Office 1948 28 p illus. 23 cm. (United States. Department of Agriculture. Miscellaneous publication no 664) Paper $0 10 730

Contents Physical plant, staff and collaborators of the laboratory Objectives and work of the laboratory Occurrence of mineral nutritional diseases of plants and animals in the United States. Cobalt deficiency Factors influencing vitamin content of crops. Vitamin C in tomatoes Influence of variety on nutritive value. Breeding potatoes for vitamin C. Increasing thiamine in wheat. Soil in relation to quantity and composition of feed. Phosphorus fertilization and the nutritive value of crops. Functions and requirements of specific nutrients in animal nutrition. Methods for the nutritional evaluation of foods and feeds. Significance of the laboratory's program and the outlook for the future. Publications of the Plant, Soil, and Nutrition Laboratory

Note This pamphlet describes the work of the U S. Plant, Soil, and Nutrition Laboratory and summarizes the results of seven of the investigations carried on there.

METABOLISM

BRODY SAMUEL

Bioenergetics and growth with special reference to the efficiency complex in domestic animals. New York Reinhold Publishing

Corporation 1945 1023 p illus. 24 cm. (A publication of the Herman Frasch Foundation) $8.50 731

Contents: Introduction: Factors in the efficiency complex. Energetics, energy units, and dietary-energy categories. Energetic efficiencies of growth and work processes. Specific dynamic action and efficiency of productive processes. Plane of nutrition the principle of diminishing increments, and efficiency Metabolic catalysts in the efficiency complex—enzymes, minerals and vitamins in biologic oxidations. Metabolic catalysts in the efficiency complex—hormones. Metabolic catalysts in the efficiency complex—seasonal rhythms. Metabolic catalysts in the efficiency complex—diurnal rhythms. Homeostasis and equivalence theory Homeothermy, temperature in life processes, and productive efficiency Methods in animal calorimetry Basal energy and protein metabolism in relation to body weight in mature animals of different species. Metabolism and pulmonary ventilation in relation to body weight during growth. Maintenance needs in relation to basal metabolism, body size, and productive efficiency Time relations of growth of individuals and populations. Linear growth, form, and function. Aging in relation to growth and efficiency with special reference to milk and egg production. Physiologic time and equivalence of age. Nutritional aspects in the efficiency complex. Milk—nutritional, social, and physiological aspects. The monetary economy of milk production. Egg production—nutritional and energetic efficiency aspects. Energetic efficiency of muscular work and indices of work-reserve capacity Summary and integrating discussion. Conversion factors. Author's index. Subject index.

Note. A systematic presentation of the results obtained in major program of research into the energetics of farm animals. Although the main object was to investigate problems with practical applications, the approach was fundamental, hence many problems without immediate practical value, e.g. physiologic time and equivalence of age were studied. Pertinent literature is cited in footnotes with statements in the text keyed to the references. The investigations were sponsored by the Herman Frasch Foundation for Research in Agricultural Chemistry and were carried out by the Missouri Agricultural Experiment Station.

CARPENTER, THORNE MARTIN

Tables, factors, and formulas for computing respiratory exchange and biological transformations of energy Fourth edition. Washington, D C Carnegie Institution of Washington 1948 147 p 25 cm. (Carnegie Institution of Washington. Publication 303C) Paper $0 75 cloth, $1.25 732

Note. (1949) For full description of this useful reference book see the note under this number in *Scientific medical, and technical books, 1930–1944* In the fourth edition the work is unchanged except for the enlargement of one table and the addition of two new ones.

JOSIAH MACY JR. FOUNDATION

Biological antioxidants. First conference, October 10–11 1946 New York, N Y Edited by Cosmo G Mackenzie. New York Josiah Macy Jr Foundation, 1946 81 p illus. 23 cm. Paper $2 00. 733

Contents: The role of the conference in scientific investigation, by F Fremont-Smith The scope of the Conference on Biological Antioxidants, by P Gyorgy Physico-chemical aspects of antioxidants, by H. S. Taylor Some properties and reactions of methyl hydroperoxido oleate, by C E. Swift Kinetics and mechanisms in the oxidation of methyl linoleate in the presence and absence of antioxidants, by W O Lundberg Spectrophotometric studies of the oxidation of the linoleates, by R. T Holman. Kinetic studies on the antienzymatic synergism between tocopherol and ascorbic acid, by C. Golumbic Fat rancidity and biological antioxidants, by R H. Barnes. Effects of oxidized fats in the diet of the rat, by B Kennelly and F W Quackenbush. Alpha-tocopherol phosphate as biological antioxidant—its role in cellular metabolism, by O. Boyd Houchin. The role of tocopherol in muscle metabolism—tocopherol as physiological antioxidant, by H. A. Mattill Specific unsaturated fatty acids in the production of acid-fast pigment in the vitamin E-deficient rat and the protective action of tocopherols, by L J Filer R. E. Rumery and K. E. Mason General discussion. Index of speakers.

—— Biological antioxidants Second conference, Oct. 9–10 1947 New York, N Y Edited by Cosmo G Mackenzie. New York Josiah Macy Jr Foundation 1947 116 p. illus 23 cm. Paper $2.25 734

Contents: Observations on the physico-chemical aspects of antioxidants, by H. S. Taylor. Some aspects of chain reactions in addition polymers, by R. B. Mesrobian. Polymerization of the unsaturated fatty acids, by J P Kass. Current aspects of fat metabolism, by W C. Stadie. Properties of the liver fatty acid oxidase system, by A. L. Lehninger. Fatty acid oxidation by the insoluble rabbit kidney enzymes, by W Eugene Knox. Some aspects of interference with oxidation in the cell, with reference to the suppression of flavoenzyme catalysis, and the application of the sulfhydryl hypothesis, by L. Hellerman. Chemical changes in pyrolized lard and biological effects produced in rats ingesting heated fats, by H. F Morris. The antioxidant effect of carcinogenic agents, by H. P Rusch. Index of speakers.

Note. These papers constitute the transactions of the conferences named. Several of them are accompanied by edited reports of the discussion at the meeting. The papers are short and rather informal, and their total effect is that of symposium of specialists. The volumes are of interest primarily to biochemists.

RIDDLE, OSCAR, AND OTHERS

Studies on carbohydrate and fat metabolism with especial reference to the pigeon by Oscar Riddle and associates, Department of Genetics Carnegie Institution of Washington. Washington, D C. Carnegie Institution of Washington, 1947 128 p illus 25 cm. (Carnegie Institution of Washington. Publication 569) $2.25 735

Contents: Concerning pituitary and other glycosuria in pigeons, by Oscar Riddle and Louis B. Dotti. Fractions of anterior pituitary extract obtained by ammonium sulfate precipitation their assay and some of their actions on the carbohydrate and fat metabolism of pigeons, rats, and rabbits, by Oscar Riddle David F Opdyke, and Robert W Bates. The action of pituitary and other hormones on the carbohydrate and fat metabolism of young pigeons, by Oscar Riddle and David F Opdyke. Actions of alkaline extract of posterior pituitary gland and of pitocin on some aspects of carbohydrate and fat metabolism in pigeons, by Frank E. Visscher Horace M. Marvin, and Oscar Riddle. The relation of hormones to the concentration of fat in blood, by Oscar Riddle, Tell Senum, and Vita M Rauch. Differences in the carbohydrate and fat metabolism of bird and mammal, by Oscar Riddle.

Note: The papers published here report in text and tables the results of group of investigations on carbohydrate and fat metabolism carried on by the authors over period of seven years. The anterior pituitary gland having become recognized as regulating agent in the metabolism of carbohydrate and fat, the investigations were planned to throw light upon the nature and number of the activities regulated by this gland and upon the number and identity of the pituitary hormones concerned in the regulation of these activities. The laboratory experience of the authors and others had pointed to the pigeon as the most suitable species for the studies proposed. Although most of the experimental work was done on pigeons, in the more important of the tests comparative observations were also made upon ring doves, rats, and rabbits.

SOSKIN SAMUEL AND RACHMIEL LEVINE

Carbohydrate metabolism correlation of physiological biochemical and clinical aspects. Chicago University of Chicago Press, 1946 315 p illus. 25 cm. $6 00 736

Contents: Part I, The biochemistry and energetics of carbohydrate metabolism The importance of carbohydrates in nutrition. The enzymatic machinery of carbohydrate metabolism. The intermediary steps in carbohydrate metabolism. The liberation and transfer of the energy derived from carbohydrate breakdown. The use of energy for muscular contraction. Part II, Introductory physiological considerations: Nature and occurrence in the tissues of materials important to carbohydrate metabolism. Site of origin of blood sugar. The use of the diabetic organism in the study of gluconeogenesis. Part III, Critical survey of the chemical criteria of diabetes: Quantitative excretion of administered sugar and the dextrose:nitrogen ratio. Ketosis. The respiratory quotient. Gluconeogenesis from pro-

tein. Glucose-compounds from fat. Utilization, dissimilation, and oxidation of carbohydrate. Part IV The role of the endocrine glands in carbohydrate metabolism Pancreas (insulin) The mode of action of insulin. The adrenal cortex. The thyroid. The anterior pituitary Permanent experimental diabetes produced without surgery Part Integration of physiological and clinical aspects: Regulation of carbohydrate metabolism Pathological physiology and clinical applications. Comparative physiology of diabetes. Present frontiers of research in metabolism. Index.

Note: The purpose of this work is to serve as framework and reference volume for the teaching of carbohydrate metabolism and of selected aspects of fat and protein metabolism to students of physiology biochemistry and medicine. The authors point out that the instruction in this subject, being divided among different departments of the same institution, often results in the student securing disjointed understanding of carbohydrate metabolism; and they present their volume to help bridge the gaps for both students and teachers. The book is also intended to be of use to the practicing physician interested in modernizing his knowledge of the subject, particularly in reference to tissue-enzyme chemistry and to the pathological physiology of diabetes. The bibliographical citations at the ends of the chapters number about twelve hundred.

VON BRAND THEODOR

Anaerobiosis in invertebrates. Normandy Mo. Biodynamica, 1946 328 p. illus. 25 cm. (Biodynamica monographs, edited by B J Luyet. No. 4) $5.80 737

Contents: Introduction. Part I, Occurrence of anaerobiosis among invertebrates: Methods of investigation. Anaerobic habitats. Survey of invertebrates for anaerobiosis. Part II, The anaerobic metabolism of invertebrates: Partial transition from aerobic to anaerobic metabolism. Aerobic fermentations. The sources of energy in anaerobiosis. Anaerobic processes. Recovery from anaerobiosis. Part III, General adaptation to the lack of oxygen and origin of anaerobiosis. The place of anaerobic processes in the general metabolism of invertebrates. Basis for the differences in anaerobic functions among invertebrates. The origin of anaerobiosis in invertebrates. Anaerobiosis and the origin of endoparasitism. Appendix. Bibliography. Subject index. Author index.

Note: The subject of this book is life in the absence of free oxygen among invertebrate animals Written from the biological standpoint, it is intended primarily for ecologists and comparative physiologists. The literature of the subject up to about the beginning of 1945 is summarized and cited. A substantial part of the contents of the book is reprinted from *Biodynamica*, no. 92, 1944 and nos. 100 and 101, 1945.

WORLEY LEONARD GEORGE

The golgi apparatus—an interpretation of its structure and significance. New York The New York Academy of Sciences, 1946 56 p illus. 23 cm. (New York Academy of Sciences. Annals. Vol. 47 p. 1–56 1946) Paper $0 75 738

Contents. Introduction. The golgi substance. The generalized golgi body The golgi droplet. The golgi granule. Possible origin of the golgi bodies. The active golgi bodies. The pycnotic phases and golgi body multiplication. The golgi system in adult somatic cells. Outlook. Summary of conclusions. Literature cited

Note: A review of current knowledge regarding the structure and function of the golgi apparatus. Some of the concepts which are set forth are new and based on the author's investigation of living golgi substance. He suggests that golgi substance deficiency may be at the bottom of some of the incompletely explained nutritional diseases, and of the activity of neoplastic tissue. A nine-page bibliography is included.

SENSES AND SENSATION

DAVIS HALLOWELL, AND OTHERS

Hearing aids an experimental study of design objectives by H. Davis S S Stevens, R. H. Nichols, Jr., C. V Hudgins G E. Peterson, R. J Marquis D A. Ross. Cambridge, Mass Harvard University Press, 1947 197 p illus. 23 cm. Paper $2.00 739

Contents. Introduction and summary The hard-of-hearing listeners. Audiometric tests. The master hearing aid. Articulation tests. Articulation curves of normal listeners. Objective criteria for evaluating the performance of hearing aids. The relative performance of tilted frequency patterns for hard-of-hearing listeners. The problem of tolerance: choice of clipping level. Quality comparisons of the frequency patterns. Restriction of the frequency range. Compression amplification versus peak clipping. Articulation scores in relation to other estimates of auditory impairment. Design objectives for hearing aids. Appendices Individual data on the hard-of-hearing subjects. A clickless electronic switch. The master hearing aid. Articulation curves obtained with band pass filters. Compression amplification. Bibliography Index.

Note: The report of program of fundamental research that was carried out at Harvard University under the auspices of the Office of Scientific Research and Development. The methods and findings of the program are described in detail. Tentative design objectives for hearing aids are described. Also, the results indicate that the fitting of hearing aids need not be based on the relation between the frequency characteristic of the instrument and the "shape" of the patient's audiogram, as is ordinarily done.

DAVIS, HALLOWELL, editor

Hearing and deafness a guide for laymen. New York Murray Hill Books Inc., 1947 496 p illus. 22 cm. $5 00 740

Contents Foreword, by Louise Tracy Introduction, by C. Stewart Nash. Part I, Audiology Audiology— meeting of varied specialists, by H. Davis. Part II, Hearing and hearing loss: Physics and psychology of hearing, by H. Davis. Anatomy and physiology of the ear by H. Davis. Medical aspects of hearing loss, by E. P Fowler J Surgical treatment of hearing loss, by T E. Walsh. Part III, Auditory tests and hearing aids: Tests of hearing, by H. Davis. Hearing aids, by H. Davis. The choice and use of hearing aids, by S. R. Silverman. Part IV Rehabilitation for hearing loss: Speech reading, by M. D Pauls. Auditory training, by R. Carhart. Conservation of speech, by R. Carhart. Military aural rehabilitation, by H. Canfield and L. E. Morrisett. Part Education and psychology: From Aristotle to Bell, by S. R. Silverman. Hard-of-hearing children, by S. R. Silverman. Deaf children, by S. R. Silverman and H. S. Lane. The psychology of the hard-of-hearing and the deafened adult, by D. A. Ramsdell. Part VI, Social and economic problems Organizations for the acoustically handicapped, by B. C. Wright. Employment for the hard-of-hearing, by A. M. Hill. Vocational guidance for the deaf, by H. R. Myklebust. Index.

Note: A comprehensive presentation of information on defective hearing. The volume was planned as whole, and the papers it contains were written expressly for it. Although designed primarily for laymen, it is of value also to such groups as social workers, teachers, and general medical practitioners who deal with deaf people in the practice of their professions. The chapters vary considerably in difficulty Some are non-technical and easy to read, but the majority are level above popular reading and include some technical terms not in the vocabulary of the average reader.

LUNEBURG RUDOLF KARL

Mathematical analysis of binocular vision. Princeton, N J Princeton University Press for Hanover Institute, 1947 104 p illus. 28 cm. Paper $2.50 741

Contents (abridged) Mathematical analysis of binocular vision. Introduction. Section 1 Psychometric coordination. Section 2 Bipolar coordinates. Section 3 Characterization metric by quadratic differentials. Section 4, The psychometric of visual space. Section 5 Derivation of the hyperbolic metric of visual space. Section 6, Geodesic lines—the horopter problem. Section 7 The alley problem. Section 8, Rigid transformations of the hyperbolic space Conclusion

Note: As indicated in both title and contents, this abstract monograph is concerned with the development of mathematical theory of visual perception. And, as would be expected in treatment of an optical problem, the mathematics involved is very largely geometry both Euclidean and non Euclidean, with particular emphasis on the hyperbolic geometry of Lobachevski. The work is intended for research scientists. A knowledge of graduate mathematics is required.

Corporation 1945 1023 p illus. 24 cm. (A publication of the Herman Frasch Foundation) $8.50 731

Contents: Introduction. Factors in the efficiency complex. Energetics, energy units, and dietary-energy categories. Energetic efficiencies of growth and work processes. Specific dynamic action and efficiency of productive processes. Plane of nutrition, the principle of diminishing increments, and efficiency. Metabolic catalysts in the efficiency complex—enzymes, minerals and vitamins in biologic oxidations. Metabolic catalysts in the efficiency complex—hormones. Metabolic catalysts in the efficiency complex—seasonal rhythms. Metabolic catalysts in the efficiency complex—diurnal rhythms. Homeostasis and organismic theory. Homeothermy temperature in life processes, and productive efficiency. Methods in animal calorimetry. Basal energy and protein metabolism in relation to body weight in mature animals of different species. Metabolism and pulmonary ventilation in relation to body weight during growth. Maintenance needs in relation to basal metabolism, body size, and productive efficiency. Time relations of growth of individuals and populations. Linear growth, form, and function. Aging in relation to growth and efficiency with special reference to milk and egg production. Physiologic time and equivalence of age. Nutritional aspects in the efficiency complex. Milk—nutritional, social, and physiological aspects. The monetary economy of milk production. Egg production—nutritional and energetic efficiency aspects. Energetic efficiency of muscular work and indices of work-reserve capacity. Summary and integrating discussion. Conversion factors. Author' index. Subject index.

Note: A systematic presentation of the results obtained in major program of research into the energetics of farm animals. Although the main object was to investigate problems with practical applications, the approach was fundamental, hence many problems without immediate practical value, e. physiologic time and equivalence of age were studied. Pertinent literature is cited in footnotes with statements in the text keyed to the references. The investigations were sponsored by the Herman Frasch Foundation for Research in Agricultural Chemistry and were carried out by the Missouri Agricultural Experiment Station.

CARPENTER THORNE MARTIN

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Note (1949) For full description of this useful reference book see the note under this number in *Scientific medical, and technical books, 1930–1944* In the fourth edition the work is unchanged except for the enlargement of one table and the addition of two new ones.

JOSIAH MACY JR FOUNDATION

Biological antioxidants. First conference, October 10–11 1946 New York, N Y Edited by Cosmo G Mackenzie. New York Josiah Macy Jr Foundation 1946 81 p illus. 23 cm. Paper $2 00 733

Contents The role of the conference in scientific investigation, by F Fremont-Smith. The scope of the Conference on Biological Antioxidants, by P Gyorgy Physico-chemical aspects of antioxidants, by H S. Taylor. Some properties and reactions of methyl hydroperoxide oleate, by C. E. Swift. Kinetics and mechanisms in the oxidation of methyl linoleate in the presence and absence of antioxidants, by W O. Lundberg Spectrophotometric studies of the oxidation of the linoleates, by R. T Holman Kinetic studies on the antioxygenic synergism between tocopherol and ascorbic acid, by C. Golumbic. Fat rancidity and biological antioxidants, by R. H. Barnes. Effects of oxidized fats in the diet of the rat, by B Kennelly and F W Quackenbush. Alpha-tocopherol phosphate as biological antioxidant—its role in cellular metabolism, by O Boyd Houchin. The role of tocopherol in muscle metabolism—tocopherol as physiological antioxidant, by H. A. Mattill. Specific unsaturated fatty acids in the production of acid fast pigment in the vitamin E-deficient rat and the protective action of tocopherols, by L. J. Filer R. E. Rumery and K. E. Mason. General discussion. Index of speakers.

—— Biological antioxidants Second conference Oct. 9–10, 1947 New York, N Y Edited by Cosmo G Mackenzie. New York Josiah Macy Jr Foundation 1947 116 p illus. 23 cm. Paper $2.25 734

Contents. Observations on the physico-chemical aspects of antioxidants, by H. S. Taylor Some aspects of chain reactions in addition polymers, by R. B. Mesrobian. Polymerization of the unsaturated fatty acids, by J. P Kass. Current aspects of fat metabolism, by W C. Stadie. Properties of the liver fatty acid oxidase system, by A. L. Lehninger Fatty acid oxidation by the insoluble rabbit kidney enzymes, by W Eugene Knox. Some aspects of interference with oxidation in the cell, with reference to the suppression of flavoenzyme catalysts, and the application of the sulfhydryl hypothesis, by L. Hellerman. Chemical changes in pyrolized lard and biological effects produced in rats ingesting heated fats, by H. F Morris. The antioxidant effect of carcinogenic agents, by H. P Rusch. Index of speakers.

Note. These papers constitute the transactions of the conference named. Several of them are accompanied by edited reports of the discussion at the meeting. The papers are short and rather informal, and their total effect is that of symposium of specialists. The volumes are of interest primarily to biochemists.

RIDDLE OSCAR, AND OTHERS

Studies on carbohydrate and fat metabolism, with especial reference to the pigeon by Oscar Riddle and associates Department of Genetics Carnegie Institution of Washington. Washington D C Carnegie Institution of Washington, 1947 128 p illus 25 cm. (Carnegie Institution of Washington. Publication 569) $2.25 735

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Note The papers published here report in text and tables the results of group of investigations on carbohydrate and fat metabolism carried on by the authors over period of seven years. The anterior pituitary gland having become recognized as regulating agent in the metabolism of carbohydrate and fat, the investigations were planned to throw light upon the nature and number of the activities regulated by this gland and upon the number and identity of the pituitary hormones concerned in the regulation of these activities. The laboratory experience of the authors and others had pointed to the pigeon as the most suitable species for the studies proposed. Although most of the experimental work was done on pigeons, in the more important of the tests comparative observations were also made upon ring doves, rats, and rabbits.

SOSKIN SAMUEL, AND RACHMIEL LEVINE

Carbohydrate metabolism correlation of physiological biochemical and clinical aspects. Chicago University of Chicago Press, 1946 315 p. illus. 25 cm. $6 00 736

Contents: Part I, The biochemistry and energetics of carbohydrate metabolism The importance of carbohydrates in nutrition. The enzymatic machinery of carbohydrate metabolism. The intermediary steps in carbohydrate metabolism. The liberation and transfer of the energy derived from carbohydrate breakdown. The use of energy for muscular contraction. Part II, Introductory physiological considerations: Nature and occurrence in the tissues of materials important to carbohydrate metabolism. Site of origin of blood sugar The use of the diabetic organism in the study of gluconeogenesis. Part III, Critical survey of the classical criteria of diabetes: Quantitative excretion of administered sugar and the dextrose:nitrogen ratio. Ketosis. The respiratory quotient. Gluconeogenesis from pro-

BIOCHEMISTRY

GENERAL

ANNUAL REVIEW OF BIOCHEMISTRY Volume XVII. J Murray Luck, editor Stanford Calif Annual Reviews Inc., 1948 801 p 23 cm. $6.00 743

Contents: Biological oxidations and reductions, by H. Weil-Malherbe. Nonoxidative enzymes, by J. B. Sumner Chemistry of the carbohydrates, by D. A. Fries and R. W Jeanloz. The chemistry of the immunopolysaccharides, by W N Haworth and M. Stacey X-ray crystallographic studies of compounds of biochemical interest, by D Crowfoot. Chemistry of the lipids, by J Folch-Pi and W M. Sperry The chemistry of the proteins and amino acids, by K. O. Pedersen. Nucleoproteins, nucleic acids, and related substances, by E. Chargaff and E. Vischer Carbohydrate metabolism, by B. Vennesland. Lipid metabolism, by I. L. Chaikoff and C. Entenman. The metabolism of proteins and amino acids, by J. B. Allison. The metabolism of drugs and toxic substances, by O. Bodansky Clinical applications of biochemistry by L. J. Zeldis and S. C Madden. Biochemistry of the hormones, by T F Gallagher The vitamins, by R. L. Onr Clinical aspects of vitamins, by T D. Spies. The biochemistry of carcinogenesis, by H. P Rusch and G. A. Le Page. The biochemistry of the natural pigments, by E. Lederer The terpenes (in relation to the biology of genus Pinus) by N. T Mirov. The alkaloids, by R. F Dawson. Photosynthesis, by E. C. Wassink. Mineral nutrition of plants, by H. Burström. Plant hormones, by P W Zimmerman and A. E. Hitchcock. Bacterial metabolism, by I. C. Gunsalus. The chemistry of penicillin, by E. Chain. Ruminant digestion, by S. R. Elsden and A. T Phillipson. Physiological aspects of genetics, by G. W Beadle. Indexes.

Note: As in previous volumes of this series, each paper is résumé of recently published literature. References are made to the original sources by means of key numbers in the text which refer to the extensive literature list at the end of each paper. The series is one of the most important reference aids in the field of biochemistry

BLOCK, RICHARD JOSEPH AND DIANA BOLLING

The amino acid composition of proteins and foods analytical methods and results. Springfield, Ill. Charles C Thomas 1945 398 p. illus. 26 cm. $7.50 744

Contents: The diamino acids, arginine, histidine, lysine, hydroxylysine, and citrulline. The aromatic amino acids. Tyrosine, tryptophane, phenylalanine, diiodotyrosine, and thyroxine. The sulfur containing amino acids—cystine, cysteine, and methionine. The β hydroxy amino acids—serine and threonine. The "leucines"—leucine, isoleucine, and valine. The dicarboxylic amino acids—aspartic acid and glutamic acid. Glycine and alanine Proline and hydroxyproline. General methods for amino acids. Summary tables. The essential amino acid requirements of man. Bibliography Author index. Subject index.

Note: Principally compilation for biochemists of analytical methods and results that have been reported in the widely scattered literature. Some of the author's own investigations that had not been published previously are included also Procedures are described in sufficient detail for experienced analysts to follow them, but references are carefully given to the original source where usually fuller treatment is available. Although it is largely limited to the recent literature, the bibliography contains 712 references to the international literature. In the second printing issue in 1947 the form but not the content of many of the tables has been changed.

BURRELL, ROBIN CHARLES

Organic chemistry for students of biological sciences. Minneapolis Burgess Publishing Company, 1947 242 p illus. 27 cm. Paper $2 75 745

Contents (abridged). The chemical composition of plant and animal materials. Definition and scope of organic chemistry Methods of organic chemistry The classification of organic compounds. Organic nomenclature. Hydrocarbons. Structural anhydrides of acids and alcohols. Fats and related compounds—Lipides. Carbohydrates. Nitrogen containing derivatives of acyclic hydrocarbons. The proteins. Enzymes. Vitamins and hormones. Derivatives of cyclic hydrocarbons. Heterocyclic compounds. Miscellaneous organic compounds of biological importance. The pronunciation of names and terms in organic chemistry List of reference books with publishers. Index.

Note A college textbook which emphasizes the lipids, proteins, carbohydrates, and vitamins—those parts of organic chemistry the understanding of which is of most usefulness to students of agriculture, biology and home economics. Each chapter closes with set of review questions and list of related periodical and book references. The author is Professor of Agricultural Chemistry in the Ohio State University

COWDRY EDMUND VINCENT

Laboratory technique in biology and medicine. Second edition. Baltimore The Williams & Wilkins Company 1948 269 p 23 cm. $4 00. 746

Note (1257) A compilation of information on techniques and on the chemical substances and instruments that are of interest in professional laboratory work. The information is supplied in paragraphs devoted to specific topics, and the arrangement is in dictionary form, with abundant cross-references. Citations of pertinent literature are given under most headings. In this edition the work has been considerably extended and its title has been changed to indicate its wider application.

GREEN DAVID EZRA, editor

Currents in biochemical research. New York Interscience Publishers, Inc., 1946 486 p illus 23 cm. $4.00 747

Contents The gene and biochemistry, by G. W Beadle. Viruses, by W M. Stanley Photosynthesis and the production of organic matter on earth, by H. Gaffron. The bacterial cell, by René J Dubos. The nutrition and biochemistry of plants, by D. R. Hoagland. Biological significance of vitamins, by C. A. Elvehjem. Some aspects of vitamin research, by Karl Folkers. Quantitative analysis in biochemistry by Donald D. Van Slyke. Enzymic hydrolysis and synthesis of peptide bonds, by Joseph S. Fruton. Metabolic process patterns, by Fritz Lipmann. Biochemistry from the standpoint of enzymes, by David E Green. Enzymic mechanisms of carbon dioxide assimilation, by Severo Ochoa. Hormones, by B. A. Houssay Fundamentals of oxidation and reduction, by Leonor Michaelis. Mesomeric concepts in the biological sciences, by Herman M. Kalckar Viscometry in biochemical investigations, by Max A. Lauffer Isotope technique in the study of intermediary metabolism, by D. Rittenberg and David Shemin. Mucolytic enzymes, by Karl Meyer. Some aspects of intermediary metabolism, by Konrad Bloch. The steroid hormones, by Gregory Pincus. Plant hormones and the analysis of growth, by Kenneth V Thimann. Chemical mechanism of nervous action, by David Nachmansohn. Some aspects of biochemical antagonism, by D W Woolley Chemotherapy—applied cytochemistry by Kellen D Hutchings. Biochemical aspects of pharmacology by Arnold D. Welch and Ernest Bueding. Some biochemical problems posed by diseases of muscle, by Charles L. Hoagland. Physiology and biochemistry by Surgeon Captain C. H. Best. X-ray diffraction and the study of fibrous proteins, by I. Fankuchen and H Mark Immunochemistry by Michael Heidelberger Social aspects of nutrition, by W H. Sebrell. Organization and support of science in the United States, by L. C. Dunn.

Note The original papers in this volume are written for the most part by specialists but they are directed at non-specialists. The purpose of the book is to indicate to scientifically trained persons, such as biologists, chemists, pharmacists, and medical practitioners, the significance to them of recent and current biochemical research.

HARROW BENJAMIN

Textbook of biochemistry Fourth edition. Philadelphia W B Saunders Company 1946 592 p. illus. 24 cm. $5 00 748

Contents Introduction. Carbohydrates. The lipids. Proteins. Nucleoproteins—nucleic acids. Enzymes. Foods. Vitamins. Synthesis in the plant kingdom. Digestion. Detoxication. Absorption. Blood. Immunochemistry—chemotherapy. Chemistry of respiration. Metabolism of carbohydrates. Metabolism of the lipids. Metabolism of proteins. Biological oxidation. Energy metabolism. Inorganic metabolism—water. Chemistry of the tissues. Urine. Hormones. The chemistry of the nervous system. Appendix. Index.

Note (1923) A standard textbook for first college courses in biochemistry. It is shorter than some introductory texts, but by writing concisely and including little historical information the author has managed to present wide range of material. The chapters are supplemented by annotated lists of related literature, feature that gives some reference value to the book. In this edition rather large number of changes, widely scattered through the text, have been made. Most of the new material is concerned with discoveries made since 1943. The changes are described in detail in the book's preface.

HAWK, PHILIP BOVIER, AND OTHERS

Practical physiological chemistry by Philip B Hawk, Bernard L. Oser and William H. Summerson. Twelfth edition Philadelphia The Blakiston Company 1947 1323 p illus. (part col d) 24 cm $10 00 749

Contents (*abridged*) Some physicochemical properties of solutions. Carbohydrates. Fats. Proteins. Nucleic acids and nucleoproteins. Milk. Epithelial and connective tissues, and teeth. Muscular tissue. Nervous tissue. Enzymes and their action. Salivary digestion. Gastric digestion. Pancreatic digestion. Intestinal digestion. Intestinal absorption. Putrefaction and detoxication. Feces. Blood and lymph. Respiratory exchange and neutrality regulation. Energy metabolism. Hormones. Urine. Carbohydrate, fat, and protein metabolism. Inorganic metabolism. Vitamins and deficiency diseases. Antibiotics—metabolic antagonists. Appendix. Index.

Note (1923) In this guide to the methods and materials in use in modern biochemical laboratories, organic chemical reactions are systematically developed and their respective processes discussed. Modern micro-chemical methods are stressed, hydrogen-ion concentration is given an important section, and vitamins and methods for their assay are also fully treated. This edition has been extensively revised and is 344 pages longer than the 1937 volume. The chapters on nervous tissue and enzymes have been expanded and the many new sections now include material on the polarograph, sulfa drugs, the electrophoretic fractionation of plasma proteins, composition of foods, and on certain vitamins importance has been realized since the previous edition. Each chapter concludes with laboratory exercises and brief bibliography. The book is intended for students and workers in biochemical laboratories.

HÖBER, RUDOLF

Physical chemistry of cells and tissues by Rudolf Höber with the collaboration of David I. Hitchcock, J B Bateman, David R. Goddard, Wallace O Fenn. Philadelphia The Blakiston Company 1945 676 p. illus. 24 cm. $9.00 750

Contents (*abridged*) Section 1, Selected principles of physical chemistry by David I. Hitchcock. Section 2 Large molecules—their physicochemical properties and their architectural and functional significance in living matter by J B Bateman. Some properties of large molecules in solution. Condensed systems of large molecules. Some properties of films and membranes. Section 3 Introductory remarks concerning the architecture of protoplasm, by Rudolf Höber. Section 4 The surface of the protoplast, its properties and its architecture, by Rudolf Höber. The permeability of the cells to organic nonelectrolytes. Permeability to electrolytes. Permeability to weak bases and weak acids. Permeability to water. Section 5, Influence of some extracellular factors on cellular activity by Rudolf Höber. Section 6 The respiration of cells and tissues, by David R. Goddard. Section 7 Contractility by Wallace O Fenn. Section 8 Passive penetration and active transfer in animal and plant tissues, by Rudolf Höber. Authors' index. Subject index.

Note The fundamental theme of this book is that physiology is essentially branch of physical chemistry. The elementary processes combined in the life of cell are analyzed and discussed from this viewpoint. The discussion proceeds from the simplest principles of physical chemistry which are applicable to analyses of the more complex cell processes such as muscular contraction, the transfer of body fluids, and the energetics of such phenomena. The work is based largely on published literature, but in some of their applications and interpretations the authors have purposely gone beyond other authorities. The book is primarily for graduate physiologists. There are many hundreds of references to pertinent literature.

KLEINER, ISRAEL S

Human biochemistry Second edition. With seventy-seven text illustrations and five color plates. St. Louis The C V Mosby Company 1948 649 p. illus. (part col d) 25 cm. $7 00 751

Contents (*abridged*) Physical chemistry. Carbohydrates. Lipids. Proteins. Tissues. Milk. Blood. Enzymes. Digestion. Chemical changes within the large intestine. Vitamins. Foods. Physiological oxidations. Nitrogen metabolism. Carbohydrate metabolism. Lipid metabolism. Mineral metabolism and water balance. Urine. The chemistry of respiration and acid base balance. Energy metabolism. Changes in the chemical composition of blood. Hormones. Chemical structure in relation to biological phenomena. Appendix: Standard buffer solutions. Index.

Note: A textbook for undergraduate medical students in which there is consistent correlation between biochemical knowledge and clinical medicine. The standard, accepted knowledge is covered adequately. There is fair amount of material on recent developments, particularly in chapter titled, "Recent clinical applications. In preparing the present edition some obsolete material was deleted and considerable amount of new material added. There is new chapter on chemical structure in relation to biological phenomena which includes the subject of detoxications. Several additions have been made in the chapter on recent clinical applications. Altogether the work is 54 pages longer

MITCHELL PHILIP HENRY

A textbook of biochemistry New York McGraw Hill Book Company Inc., 1946 640 p. illus. 24 cm. $5 00 752

Contents. Preface. An introduction to biochemical literature. Carbohydrates. Photosynthesis. Fats and related substances. Proteins and amino acids. Nucleoproteins and nucleic acids. The vitamins. Enzymes. Digestion. Absorption and detoxication. Blood and lymph. Chemistry of respiration and acid-base regulation. Biological oxidation. Calorimetry and energy metabolism. Carbohydrate metabolism. Metabolism of the lipids. Protein metabolism. Urine. Composition of foods—dietetics. The chemistry of animal tissues. Chemistry of the hormones. Chemotherapy. Author index. Subject index.

Note. A textbook designed for an introductory course offered to college students who have had training in organic and physical chemistry. Except in the chapter on chemotherapy emphasis throughout the text is upon an understanding of metabolism as foundation for the science of nutrition. The bibliographical aids include both an introductory list of journals, monographs, and review publications that are helpful to the biochemist and also extensive lists of references at the ends of chapters.

WILLIAMS ROGER JOHN AND ERNEST BEERSTECHER JR.

An introduction to biochemistry Second edition. New York D Van Nostrand Company Inc., 1948 736 p illus. 22 cm. $5 75 753

Contents (*abridged*) Section I, Composition of organisms: Cell structure. Inorganic constituents. Carbohydrates. Fats and related compounds. Proteins. Colloidal systems. Essential characteristics of living matter. Section II, Nutritional requirements of organisms. Section III, Mechanisms used by organisms in general for promoting and regulating chemical changes: Enzyme action. Permeability. Hormones and endocrine control. Biochemical genetics. Section IV, Metabolism of single cells. Section Metabolism in green seed plants. Section VI, Metabolism in mammals: Mammalian respiration. Digestion and absorption by mammals. Intermediate carbohydrate metabolism. Intermediate lipide metabolism. Intermediate protein metabolism. Excretion. Glossary. Index.

Note A textbook for college students who have had college courses in general and organic chemistry. Although it is intended

for courses offered in the senior year. It is considerably less difficult and also less comprehensive than some introductory texts in the subject. The first edition was published in 1931. In this edition the work is extensively revised, is 234 pages longer and contains three new chapters and many new illustrations. The directions for laboratory experiments that were included in the first edition has been omitted.

HORMONES AND ENZYMES

ADVANCES IN ENZYMOLOGY AND RELATED SUBJECTS OF BIOCHEMISTRY edited by F F Nord and C H. Werkman Volume v New York Interscience Publishers Inc. 1945 268 p illus. 24 cm. $5.50 754

Contents: Physical and chemical properties of tomato bushy stunt virus and the strains of tobacco mosaic virus, by N W Pirie. The coagulation of blood, by E. Chargaff. The amino acid decarboxylases of mammalian tissue, by H. Blaschko. Alcoholic fermentation of the oligosaccharides, by J. Leibowitz and S. Hestrin. Pyruvate metabolism, by E. Stotz. Recent progress in the biochemistry of Fusaria, by F F Nord and R. P Mull. Enzymatic reactions involving nicotinamide and its related compounds, by F Schlenk. Some enzyme reactions on sulfur compounds, by C. V Smythe. Author index. Subject index. Cumulative index of Volumes I, II, III, IV and

—— Advances in enzymology and related subjects of biochemistry edited by F F Nord. Volume VI. New York Interscience Publishers, Inc., 1946 563 p illus 23 cm. $6 00 755

Contents. The bacterial amino acid decarboxylases, by E. F Gale. Enzyme problems in relation to chemotherapy "adaptation, mutations, resistance, and immunity by H. G. Sevag Biological antagonisms between structurally related compounds, by D W Woolley Adenosinetriphosphatase properties of myosin, by V A. Engelhardt. Status of altered metabolism in diseases of muscle, by C. L. Hoagland. Acetyl phosphate, by F Lipmann. Microbial assimilations, by C. E. Clifton. Chemical changes in the harvested tobacco leaf—Part I, Chemical and enzymic conversions during the curing process, by W G. Frankenburg. The actions of the amylases, by R. H. Hopkins. The amylases of wheat and their significance in milling and baking technology by W F Geddes. Tocopherol interrelationships, by K. C. D Hickman and P L. Harris. Author index. Subject index. Cumulative index of Volumes I-VI.

—— Advances in enzymology and related subjects of biochemistry edited by F F Nord. Volume VII. New York Interscience Publishers, Inc., 1947 665 p illus. 23 cm. $7 00 756

Contents: Permeability and enzyme reactions, by S. C. Brooks. The properties of protoplasm with special reference to the influence of enzymic reactions, by W Seifriz. Recent views on asymmetric synthesis and related processes, by P D. Ritchie. Some applications of radioactive indicators in turnover studies, by G. Hevesy Bacterial luminescence, by F H. Johnson. Heme-linked groups and mode of action of some hemoproteins, by H. Theorell. Distribution, structure, and properties of the tetrapyrroles, by S. Granick and H. Gilder. Oxidation of organic sulfur in animals, by C. Fromageot. Interrelations in microorganisms between growth and the metabolism of vitamin-like substances, by H. McIlwain. Antibacterial substances from fungi and green plants, by F Kavanagh. Kidney enzymes and essential hypertension, by O. Schales. Recent progress in industrial fermentation, by F M. Hildebrandt. Author index. Subject index. Cumulative index to volumes I-VII.

—— Advances in enzymology and related subjects of biochemistry edited by F F Nord. Volume VIII. New York Interscience Publishers Inc. 1948 538 p illus 23 cm. $8.00 757

Contents: Fractionation of the cytoplasm, by L. Monné. Quantitative studies on complement, by M. Heidelberger and M. M. Mayer. Dehydropeptidases, by J P Greenstein. Antifatty-liver factor of the pancreas—present status, by I. L. Chaikoff and C. Entenman. Alkaloid biogenesis, by R. F Dawson. Certain aspects of the microbiological degradation of cellulose, by F F Nord and J. C. Vitucci. Synthesis of lipides, by A. Kleinzeller The biochemistry of fatty acid catabolism, by F L. Breusch. Lipoxidase and the autoxidation of unsaturated fatty acids, by Sune Bergström and R. T Holman. Enzymes of snake venoms and their biological significance, by E. A. Zeller Author index. Subject index. Cumulative index, volumes I-VIII.

Note (1934) This series began publication in 1941. Annually it presents collection of papers in which important advances in the field are reviewed. The papers are addressed to workers in biochemistry and allied fields and each is accompanied by an extensive list of the literature pertinent to the topic of the paper Except for some of the years of World War II, when the contributing authors were all Americans, the contributors are drawn from many nations.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Recent progress in hormone research proceedings of the Laurentian Hormone Conference. Volume I. Edited by Gregory Pincus. New York Academic Press Inc. 1946 399 p illus. 23 cm. $7.50 758

Contents: Section I, Neurohumoral relationships: On the role of acetylcholine in the mechanism of nerve activity by D. Nachmansohn. Hormones and mating behavior in vertebrates, by F A. Beach. Section II, Chemistry and physiology of adrenal hormones Steroids derived from the bile acids: 3 9-epoxy-Δ-cholenic acid, an intermediate in the partial synthesis of dehydrocorticosterone, by E. C. Kendall. Some advances in the partial synthesis of adrenal cortical steroids, by T F Gallagher The relation of cholesterol and ascorbic acid to the secretion of the adrenal cortex, by C. N H. Long. Studies of the role of the adrenal cortex in the stress of human subjects, by Gregory Pincus. Section III, The role of hormones in metabolic processes: The relation of the anterior pituitary hormones to nutrition, by L. T Samuels. The role of hydrolytic enzymes in some of the metabolic activities of steroid hormones, by C. D Kochakian. Studies on steroid hormones in experimental carcinogenesis, by W U. Gardner. Section IV Aspects of clinical endocrinology Endocrine aspects of human cancer by I T Nathanson. The effect of hormones on osteogenesis in man, by F Albright. Certain factors which influence the rate of growth and the duration of growth of children, by N. B. Talbot and E. H. Sobel. Experimental renal hypertension with special reference to its endocrine aspects, by A. Grollman. Indices.

—— Recent progress in hormone research the proceedings of the Laurentian Hormone Conference. Volume II Edited by Gregory Pincus. New York Academic Press, Inc. 1948 427 p. illus. 24 cm. $8.00 759

Contents: Part I, Physical methods in hormone research The characterization of sterol hormones by ultraviolet and infrared spectroscopy by R. Norman Jones. The identification and quantitative microdetermination of estrogens by ultraviolet absorption spectrophotometry, by H. B. Friedgood and J B. Garst. Part II, Pituitary control and activity: The pituitary-adrenal system, by G. Sayers and M. A. Sayers. Adrenergic control of the release of luteinizing hormone from the hypophysis of the rabbit, by J. E. Markee, C. H. Sawyer and W Henry Hollinshead. The hormonal control of lactation, by W E. Petersen. Part III, Hormone metabolism. The role of factors of the B-complex in estrogen metabolism, by R. Hertz. The metabolism of androgens, by R. I. Dorfman. Part IV Hormonal regulation of metabolism The hormonal influences on the secretion of insulin, by E. Anderson and J A. Long. The production of experimental glycosuria in the rat, by D J. Ingle. Physiology and endocrinology of the [illegible], by C. P Richter The action of the thyroid on diabetes, by B. A. Houssay Part Aspects of clinical endocrinology Sex hormone deficiencies—some clinical considerations, by E. P McCullagh. The pathologic physiology of adrenal cortical tumors and Cushing's syndrome, by E. J. Kepler, R. G. Sprague, H. L. Mason and M. H. Power. Genetic and endocrine factors in the growth and development of childhood and adolescence, by L. Wilkins. Indices.

Note: For the most part the papers collected in these volumes are reports of research still in progress or recently concluded. They are addressed to other scientists working in the same or allied fields. Reports of the discussions that followed the presentation of the papers at the conference are included.

NORTHROP, JOHN HOWARD, AND OTHERS

Crystalline enzymes by John H. Northrop, Moses Kunitz and Roger M. Herriott. Second edition revised and enlarged. New York Columbia University Press 1948 352 p. illus. 24 cm. (Columbia biological series. No XII) $7.50 760

Contents General chemistry of enzymes. Pepsin. Pepsinogen. Pepsin inhibitor Chymo-trypsinogen and chymo-trypsin. Trypsinogen, trypsin and trypsin inhibitor Carboxypeptidase. Crystalline ribonuclease. Crystalline hexokinase (heterophosphatase) Crystalline diphtheria antitoxin. Bacteriophage. Reaction of enzymes and proteins with mustard gas (bis (β chlor ethyl) sulfide) Enzymes and the synthesis of proteins Appendix. Literature. Index.

Note. (1938) A series of investigations carried out at the Laboratory of General Physiology of the Rockefeller Institute of Medical Research are reviewed and the results interpreted in this work. The findings of this research program have put rather firm foundation under the theory that enzymes and viruses are proteins. In this edition the text of the first edition has been greatly revised and enlarged—in fact, the number of pages in the book has been exactly doubled. The appendix contains information on laboratory procedures in enzyme chemistry. The literature section now runs to 37 pages and includes many references to recent literature.

PINCUS GREGORY AND KENNETH V THIMANN editors

The hormones physiology chemistry and applications Volume I. New York Academic Press Inc., 1948 886 p illus. 24 cm. $13 50 761

Contents Historical introduction, by G. Pincus and K. V Thimann. Plant growth hormones, by K V Thimann. Other plant hormones, by K. V Thimann Hormones in insects, by B. Scharrer Hormones in crustaceans, by F A. Brown Jr Hormones of the gastrointestinal tract, by H. Greengard. The physiology and chemistry of the parathyroid hormone by R O Greep The internal secretion of the pancreas, by H. Jensen Assay of ovarian hormones, by G Pincus. The chemistry and metabolism of the estrogens, by W H. Pearlman. Chemistry and metabolism of progesterone, by W H Pearlman Biochemistry of androgens, by R. I. Dorfman. Chemistry and metabolism of the adrenal cortical hormones, by R D H Heard. Chemistry of anterior pituitary hormones, by C. H Li and H M Evans. Hormonal control of mammary growth, by S. J Folley and F H Malpress. Hormonal control of lactation, by S J Folley and F H. Malpress. Author index. Subject index

Note A treatise of broad scope whose purpose is to assemble the knowledge of the subject in form that will be convenient and useful to scientists engaged in search in the field, and to other professional workers such as physicians whose interests lie in the applications of the knowledge. The treatment is monographic in style with separate extensive bibliographies for each of the chapters, and keyed references from the text to the bibliographies. The contents f the first volume are listed above. The second volume will treat mammalian endocrinology in particular and will include material on clinical applications.

SUMNER, JAMES BATCHELLER, AND G FRED SOMERS

Chemistry and methods of enzymes Second edition revised and enlarged. New York Academic Press Inc. 1947 415 p illus. 23 cm. $6.50 762

Contents Part General properties of enzymes Part Esterases. Carbohydrases. Phosphorylases, transphosphorylases, phosphoisomerases, and phosphomutases. Nucleases. Amidases Proteolytic enzymes. Part III Oxidizing enzymes. The iron enzymes The copper enzymes. Dehydrogenases containing coenzymes 1 and 2 More enzymes which reduce the cytochromes. The yellow enzymes Nucleus desmolases Miscellaneous enzymes. Desmolases. Part IV Hydrases and mutases. The role of enzymes in carbohydrate metabolism and related biological processes. Author index Subject index

Note (1 39) This monographic survey designed for advanced students and graduates engaged in research, summarizes the current knowledge of enzyme chemistry and serves as guide to the literature f the subject. Descriptions are given hich briefly cover the history occurrence, action, specificity activity measurement, activation, inactivation, preparation, and properties of most of the important enzymes. Both the text and the bibliographies in the present edition have been extensively revised.

VITAMINS

THE ASSOCIATION OF VITAMIN CHEMISTS, INC

Methods of vitamin assay New York Interscience Publishers Inc., 1947 189 p illus. 23 cm. $3.50 763

Contents Sampling for vitamin analyses. Vitamin A. Carotene. Thiamine. Riboflavin. Niacin. Ascorbic acid. Other vitamin methods. Use of check samples in control of vitamin methods. Index.

Note The Association of Vitamin Chemists compiled this manual in order to facilitate the standardization of methods of vitamin analysis. It deals chiefly with chemical and microbiological methods; but bioassays that require the use of animals are mentioned in passing and references are made to articles in which the procedures are described. The methods for hich full directions are given have all been successfully applied by several members of the Association. The chapter entitled "Other vitamin methods" consists of references to periodical articles in hich are described assay methods not yet evaluated by the Association for vitamins D E, K, biotin, folic acid, *p*-aminobenzoic acid and pyridoxine.

DANN, W J AND G HOWARD SATTERFIELD editors

Estimation of the vitamins. New York The Ronald Press Company 1947 531 p. illus. 25 cm. (Biological symposia. Vol. XII, Jaques Cattell, editor) $6 50 764

Note A collection of twenty-nine papers written by specialists and intended for professional workers in biochemistry and related fields. Both chemical and biological methods of assay are described in detail. All of the papers are accompanied by lists of related subjects.

JOHNSON BRUCE CONNOR

Methods of vitamin determination Minneapolis Minnesota Burgess Publishing Co, 1948 109 p illus. 28 cm. $3.00 765

Contents Outline of lecture course. Microbiological methods of vitamin analyses Principles of colorimetric and fluorometric methods of analysis. Carotene. Vitamin A. Vitamin D. Vitamin K-α,α-dipyridyl method. Vitamin K—prothrombin-time method. Thiamine. Riboflavin. Nicotinic acid. Pyridoxine. Pantothenic acid. Biotin. Pteroylglutamic acid (folic acid) Inositol. P-aminobenzoic acid. Choline Ascorbic acid. Microbiological determination of the amino acids.

Note. Essentially laboratory manual based on courses given to graduate students in the field of animal utrition at the University of Illinois. General procedures and techniques are followed by detailed outlines of the microbiological and chemical methods used in the determination of specific vitamins. An outline of lectures used in conjunction ith the laboratory work and brief list of reference tools are included.

VITAMINS AND HORMONES advances in research and applications. Edited by Robert S. Harris and Kenneth V Thimann. Volume III. New York Academic Press Inc. 1945 420 p illus. 24 cm. $7.50 766

Contents The interrelation of vitamins, by T Moore. The synthesis of B vitamins by intestinal bacteria, by V A. Najjar and R. Barrett. Sulfonamides and vitamin deficiencies, by F S. Daft and W H. Sebrell. Manifestations of prenatal utritional deficiency by J Warkany Growth factors in microbiology—some wider aspects of utritional studies with micro-organisms, by B C. J. G. Knight. Possibilities in the realm of synthetic estrogens, by E. C. Dodds. Chemistry of anti-pernicious anemia substances of liver by Y SubbaRow A. B Hastings, and M. Elkin. The mechanism of action and metabolism of gonadotropic hormones in the organism, by B Zondek and F Sulman. The role of acetylcholine in the mechanism of nerve activity by D Nachmansohn. Author index. Subject index.

—— Volume IV New York Academic Press, Inc., 1946 406 p illus. 24 cm. $7.50 767

Contents: The newer hematopoietic factors of the vitamin B complex, by J. J. Pfiffner and A. G. Hogan. Nutrition and resistance to infection the strategic situation, by H. A. Schneider Manifestations of nutritional deficiency in infants, by F W Clements. Effect of B vitamins on the endocrinological aspects of reproduction, by R. Hertz. Nutritional therapy of endocrine disturbances, by M. S. Biskind. The thyroid and diabetes, by B. A. Houssay Thyroactive iodinated proteins, by E. P Reineke. The protein anabolic effects of steroid hormones, by C. D Kochakian. Methods of bioassay of animal hormones, by S. A. Thayer Author index. Subject index. Cumulative index of Vols. I–IV

—— Volume V New York Academic Press, Inc., 1947 478 p illus. 24 cm. $7.50. 768

Contents. The synthesis of vitamin A and related products, by N A. Milas. Physiological availability of the vitamins, by D Melnick and B. L. Oser Thiamine and peripheral neurophysiology by A. von Muralt. The physiological effects of the pteroylglutamates in man—with particular reference to pteroylglutamic acid (PGA) by W J Darby The vitamin requirements of chicks, by H. R. Bird. Vitamin requirements of the mouse, by H. P Morris. The properties of the growth and adrenocorticotropic hormones, by C. Hao Li and H. M. Evans. Effect of exogenous estrogens on the male mammal, by C. W Emmens and A. S. Parkes. The biology of antithyroid agents, by H. A. Charipper and A. S. Gordon. The use of androgens in women by A. C. Carter E. J Cohen, and E. Shorr The clinical uses of testosterone in the male, by C. G. Heller and W O. Maddock. Author index. Subject index. Cumulative index of Vols. I–V

Note: (1951) An annual collection of original papers in which each paper is a compact monographic review of the current knowledge of the special topic named in its title. The authors are outstanding specialists and in many instances have contributed to the advance of the subject about which they write. The pertinent literature is cited in the text of each paper and full references are given in extensive bibliographies which accompany the papers.

BACTERIOLOGY

GENERAL

AMERICAN PUBLIC HEALTH ASSOCIATION

Diagnostic procedures and reagents technics for the laboratory diagnosis and control of the communicable diseases. Second edition. New York American Public Health Association 1945 549 p illus. 24 cm. $4.00 769

Contents: Culture media—stains, reagents and solutions, by A. P. Hitchens. The toxicity of dyes for certain bacteria, by E. K. Kline. The meningococcus (*Neisseria meningitidis*), by S. E. Branham. The gonococcus (*Neisseria gonorrhoeae*), by C. M. Carpenter. Tularemia (*Pasteurella tularensis*) by G. D. Brigham. Brucellosis (*Brucella melitensis Brucella abortus*, and *Brucella suis*), by A. P. Hitchens. *Hemophilus pertussis*, by P. Kendrick, G. McL. Lawson, and J. J. Miller Jr. The pneumococcus, by E. S. Robinson (revised by W. D. Sutliff). Hemolytic streptococci, by J. M. Coffey. Bacterial food poisoning, by G. M. Dack. Typhus fevers and other rickettsial infections, by H. Welch and I. A. Bengtson. *Eberthella typhosa* and other bacillary bacteria of enteric disease, by M. B. Coleman. The diphtheria bacillus (*Corynebacterium diphtheriae*) by M. Frobisher, Jr. The tubercle bacillus (*Mycobacterium tuberculosis*) by A. L. MacNabb. Examination of specimens for *Treponema pallidum*, by R. Gilbert. Serodiagnosis of syphilis, by R. Gilbert and E. Maltaner. Examination of cerebrospinal fluid for evidence of syphilis of the central nervous system, by R. Gilbert. Chancroid, lymphogranuloma venereum and granuloma inguinale by E. S. Sanderson. Rabies, by T. F. Sellers and H. E. Carnes. Pathogenic fungi, by W. D. Stovall and L. Almon. Laboratory diagnosis of helminths and Protozoa, by H. W. Brown. Blood cultures, by C. G. Burn. The laboratory diagnosis of glanders, by W. A. Hagan. The laboratory diagnosis of anthrax, by W. A. Hagan. Trichinosis, by L. S. Heathman. Infectious mononucleosis, by C. A. Stuart. The malaria parasites of man, by A. Wilcox. The diagnosis of cholera, by R. W. Linton. Appendix: Amendment to the postal laws and regulations. Index.

Note: A carefully compiled handbook of accepted and standard procedures. Each paper was prepared by one or more outstanding specialists and was evaluated in manuscript by other experts serving as referees. The book is designed as a reference manual for professional workers and technicians in medical and public health laboratories. Extensive lists of related literature accompany each paper. The first edition was published in 1941. The present edition is thoroughly revised and nine new chapters have been added. A new edition is scheduled for publication in 1950.

BERGEY DAVID HENDRICKS

Bergey's manual of determinative bacteriology, by Robert S. Breed, E. G. D. Murray and A. Parker Hitchens. Assisted by sixty contributors. Sixth edition. Baltimore The Williams & Wilkins Company 1948 1529 p 24 cm. $15.00 770

Contents (abridged): Historical survey of classifications. How bacteria are named and identified. Rules of nomenclature. Class Schizomycetes Nägeli. Order I. *Eubacteriales* Buchanan. Suborder I. *Eubacteriineae* Breed, Murray and Hitchens. Family I. *Nitrobacteriaceae* Buchanan. Family II. *Pseudomonadaceae* Winslow et al. Family III. *Azotobacteriaceae* Bergey, Breed and Murray. Family IV. *Rhizobiaceae* Conn. Family V. *Micrococcaceae* Pribram. Family VI. *Neisseriaceae* Prévot. Family VII. *Lactobacteriaceae* Orla-Jensen. Family VIII. *Corynebacteriaceae* Lehmann and Neumann. Family IX. *Achromobacteriaceae*. Family X. *Enterobacteriaceae* Rahn. Family XI. *Parvobacteriaceae* Rahn. Family XII. *Bacteriaceae* Cohn. Appendix: Suborder *Eubacteriineae*—overlooked species and synonyms. Family XIII. *Bacillaceae* Fischer. Suborder II. *Caulobacteriineae* Breed, Murray and Hitchens. Family I. *Nevskiaceae* Henrici and Johnson. Family II. *Gallionellaceae* Henrici and Johnson. Family III. *Caulobacteriaceae* Henrici and Johnson. Family IV. *Siderocapsaceae* Pribram. Appendix—Family *Pasteuriaceae* Laurent. Suborder III. *Rhodobacteriineae* Breed, Murray and Hitchens: Family I. *Thiorhodaceae* Molisch. Family II. *Athiorhodaceae* Molisch. Family III. *Chlorobacteriaceae* Geitler and Pascher. Order II. *Actinomycetales* Buchanan; Family I. *Mycobacteriaceae* Chester. Family II. *Actinomycetaceae* Buchanan. Family III. *Streptomycetaceae* Waksman and Henrici. Order III. *Chlamydobacteriales* Buchanan. Family I. *Chlamydobacteriaceae* Migula. Family II. *Crenotrichaceae* Hansgirg. Family III. *Beggiatoaceae* Migula. Appendix—Family *Achromatiaceae* Massart. Appendix—Order *Caryophanales* Peshkoff. Family I. *Pontotrichaceae* Peshkoff. Family II. *Arthromitaceae* Peshkoff. Family III. *Oscillospiraceae* Peshkoff. Family IV. *Caryophanaceae* Peshkoff. Order IV. *Myxobacteriales* Jahn. Family I. *Cytophagaceae* Stanier. Family II. *Archangiaceae* Jahn. Family III. *Sorangiaceae* Jahn. Family IV. *Polyangiaceae* Jahn. Family V. *Myxococcaceae* Jahn. Order V. *Spirochaetales* Buchanan. Family I. *Spirochaetaceae* Swellengrebel. Family II. *Treponemataceae* Schaudinn. Supplement I: Order *Rickettsiales* Gieszczykiewicz. Family I. *Rickettsiaceae* Pinkerton. Family II. *Bartonellaceae* Gieszczykiewicz. Family III. *Chlamydozoaceae* Moshkovsky. Supplement II: Order *Virales* Breed, Murray and Hitchens; Suborder I. *Phytophagineae* Holmes: Family I. *Marmoraceae* Holmes. Family II. *Annulaceae* Holmes. Family IV. *Rugaceae* Holmes. Family V. *Savoiaceae* Holmes. Family VI. *Lethaceae* Holmes. Suborder III. *Zoophagineae* Holmes. Family I. *Borreliotaceae* Holmes. Family II. *Borrelinaceae* Holmes. Family III. *Erronaceae* Holmes. Family IV. *Charonaceae* Holmes. Family V. *Trifuraceae* Holmes. Family VI. *Rabulaceae* Holmes. Supplement III: Family *Borrelomycetaceae* Turner. Index of sources and habitats. Index of names of genera and species.

Note: An internationally recognized authority on the identification and taxonomy of bacteria. In the present edition it has been very extensively revised. Numerous changes were made in the general classification and in the relationships within each genus. Much information has been added to the descriptions of individual species. The index of sources and habitats is a useful addition. The type has been reset so that the pages are now double-columned, and each contains about twenty percent more matter. In spite of the new more compact format, the work is 343 pages longer than is the fifth edition. Supplement no. 2 dealing with the filterable viruses, has been reprinted as a separate by the above publisher.

CLIFTON CHARLES E., AND OTHERS

Annual review of microbiology volume 1, by C. E. Clifton, S. Raffel and H. A. Barker. Stanford, Calif. Annual Reviews Inc., 1947 404 p. illus. 22 cm. $6.00 771

Contents: Morphology and cytology of Protozoa, by D. H. Wenrich. Antigenic variation in Protozoa and bacteria, by J. A. Harrison. Life cycle of malarial parasites, by C. G. Huff. Variation in phytopathogenic fungi, by C. M. Christensen, E. C. Stakman and J. J. Christensen. Variation in phytopathogenic viruses, by L. O. Kunkel. Some aspects of the problem of growth factors for Protozoa, by A. Lwoff. Bacterial metabolism, by D. D. Woods. Nitrogen metabolism, by E. F. Gale. Industrial fermentations, by M. J. Johnson. Quaternary ammonium compounds, by O. Rahn and W. P. Van Eseltine. Antibiotics, by R. G. Benedict and A. F. Langlykke. Chemotherapeutic agents, by E. M. Lourie. Immunochemistry, by H. P. Treffers. Some aspects of active immunization, by J. Freund. Medical and epidemiological aspects of enteric infection, by A. J. Weil. The Rickettsiae, by N. H. Topping and C. C. Shepard. Respiratory viruses, by T. Francis, Jr. Indexes.

Note: The first of a projected series in which the work being done in selected branches of microbiology will be summarized and critically evaluated in much the same manner as the fields of biochemistry and physiology are covered by the same publisher's *Annual review of biochemistry* and *Annual review of physiology* (see Index). As in these series, the papers are written by recognized experts most of whom are connected with research laboratories and universities. Statements in the papers are keyed to bibliographical citations of original sources.

DUBOS RENÉ JULES editor

Bacterial and mycotic infections of man. 101 illustrations, including 3 plates in color

Philadelphia J B Lippincott Company 1948 785 p illus. (part col'd) 26 cm. $5.00 772

Contents A synopsis of the history of medical bacteriology by E. G. D. Murray The morphology and physiology of bacteria, by R. J. Dubos and A. M. Pappenheimer, Jr. Parasitism and disease, by T Francis, Jr Properties of bacteria, by C. M. MacLeod and A. M. Pappenheimer J Response of the host to the parasite, by T Francis, Jr. The allergic state, by M. W Chase. Immunology and immunochemistry by H. P Treffers. Blood groups, by H. P Treffers. The diphtheria bacilli, by J. H. Mueller The pneumococci, by C. M. MacLeod. The streptococci, by H. F Swift. The mycobacteria, by J Freund and G. Middlebrook. The staphylococci, by J E. Blair The anthrax bacillus, by W J. Nungester The clostridia, by G. B Reed. The enteric bacteria, by H. R. Morgan and F S. Cheever The salmonella, by H. R. Morgan. Bacillary dysentery by F S. Cheever. The pasteurella, by K. F Meyer. The brucella, by S. Elberg. Listeria and erysipelothrix, by T H. Weller and C. A. Janeway The cholera vibrios, by A. T Wilson. The hemophilus group, by H. E. Alexander The pertussis group, by W L. Bradford. The meningococci, by E. B. Schoenbach. The gonococci, by J F Mahoney and J. D. Thayer The spirochetes, by H. Eagle. The bartonella group, by D. Weinman. Streptobacillus moniliformis, by A. B Sabin. The pleuropneumonia group, by A. B. Sabin. The actinomycetes, by N. F Conant and T Rosebury Medical mycology by N. F Conant. The bacteriology of mucous membranes, by T Rosebury Principles of sterilization, by B. D. Davis. Principles of chemotherapy by B. D Davis. Principles of epidemiology by K. F Maxcy The cultivation and identification of pathogenic bacteria, by E. G. D Murray and G. G Kalz. Bibliographic index. Subject index.

Note A comprehensive, well-arranged textbook of medical microbiology for students and practitioners. Each chapter is the work of an authority in the field and unity in presentation is achieved by the common emphasis on the host-parasite relations and on the pathogenic properties of the parasites. The discussions of the various bacilli and fungi follow more or less the same pattern and provide information regarding history morphology cultivation, pathogenicity diagnosis, treatment, and epidemiology Extensive chapter bibliographies have been unified by bibliographic author index.

DUBOS RENÉ JULES

The bacterial cell in its relation to problems of virulence, immunity and chemotherapy with an addendum by C F Robinow Cambridge, Mass Harvard University Press 1945 460 p illus. 22 cm. (Harvard University monographs in medicine and public health) $5.00 773

Contents: Materials, problems and methods. Cytology of bacteria. Physicochemical and staining properties of bacteria. Analysis of cellular structure by biochemical and biological methods. The variability of bacteria. The nature of virulence. Immunization against bacterial infections. Bacteriostatic and bactericidal agents. Trends and perspectives. Nuclear apparatus and cell structure of rod-shaped bacteria, by C. F Robinow Bibliography Index.

Note: In this important book the author has assembled the current knowledge of the structural and biochemical characteristics of bacteria and has related it to the biomedical phenomena of virulence and immunity, and to the techniques of chemotherapy His view is that enough data have been accumulated by these various indirect methods to permit beginning toward an understanding of bacteria (and their activities) from the viewpoint of their own biological and chemical organization, and that this approach will in turn lead to greater extension of the applications of bacteriological knowledge. The work is of interest to biologists, biochemists, and bacteriologists.

MCCULLOCH ERNEST CARR

Disinfection and sterilization. Second edition thoroughly revised. Illustrated with 68 engravings. Philadelphia Lea & Febiger 1945 472 p illus 24 cm. $6 50 774

Contents (abridged) Natural agencies which control microbial populations. The germicidal properties of the body its fluids and secretions. The destruction of microorganisms by radiant energy emanations Bacteriological and surgical sterilization by heat. Heat as bactericide. Cold and desiccation. Electricity agitation, plasmolysis and other physical agents. How disinfectants are compared. The acids. The alkalies. The metals and their salts. The dyes. The phenols, cresols, alcohols and related compounds. The halogens. Water purification. Sewage treatment. The disinfection of air The selection of disinfectant. Index.

Note A comprehensive survey designed for use as reference book in bacteriology medicine, public health, hospital management, etc. The knowledge and techniques of the field are stated and described in sufficient detail to enable the use of the book as manual when necessary; but essentially it is digest of the literature. References to source papers are embodied in the text and full citations are given in bibliographies attached to the chapters. The bibliographical entries include the titles of the papers. An unusual feature is the inclusion of mentions of many techniques such as agitation which have not yet found practical use but which are of interest in connection with research.

NICKERSON, WALTER JOHN editor

Biology of pathogenic fungi foreword by J G Hopkins. Waltham Mass. Chronica Botanica Co 1947 236 p illus 24 cm. (Annales cryptogamici et phytopathologici. Vol. VI) $5.00 775

Contents: Introduction, by W J Nickerson. On the biology of the pathogenic Torulopsidoideae, by J Lodder Chromoblastomycosis and its etiologic fungi, by A. L. Carrión and M. Silva. Biology of Pityrosporum ovale, by R. W Benham. Biology of Coccidioides, by C. W Emmons. Recent advances of the Italian school of mycopathology (1941–1945) by R. Ciferri and P Redaelli. The action of sulfonamides and antibiotic agents on the pathogenic fungi, by F T Wolf. Geographic distribution of systemic fungus diseases, by D. S. Martin. Nutrition and metabolism of pathogenic fungi, by W J Nickerson and J. W Williams. Metabolic products of pathogenic fungi by W J. Nickerson. The lipids of fungi with special reference to pathogenic fungi, by R. L. Peck. Respiration and fermentation of pathogenic fungi, by W J Nickerson. Author index. Organism index. Subject index.

Note: This volume is made up of series of short monographs written for it by specialists in several fields. Most of the monographs embody not only the author's own work, but the information and experimental results which have been reported in published literature. Each paper is accompanied by an extensive list of the pertinent literature. The treatment is aimed at persons with scientific education in biology or medicine. The book is not intended as textbook or as comprehensive manual of the subject. Instead, its scope is limited to summarized presentations of the current knowledge of the specific aspects of pathogenic fungi which are named in the chapter titles.

PORTER JOHN ROGER

Bacterial chemistry and physiology New York John Wiley & Sons Inc., 1946 1073 p illus. 23 cm. $12.00 776

Contents: Some physico-chemical properties of bacteria and their environment The growth and death of bacteria. The effects of physical agents on bacteria. The effects of chemical agents on bacteria. The chemical composition of microorganisms. Bacterial enzymes and bacterial respiration. Bacterial nutrition. Metabolism of carbon compounds by microorganisms Metabolism of nitrogen compounds by microorganisms. Microbial fermentations. Microorganism index. Subject index.

Note: A relatively comprehensive treatment that is based partly on material used in an advanced course at the University of Iowa. Both the nature of the subject matter and the skillful handling of the material make the work valuable not only to college students but to bacteriologists, chemists, and technicians in food and other industries. Many bacteriological innovations and research trends are discussed such as the effect of electromagnetic waves, sound waves, and temperature on bacteria, bacterial enzymes, and the use of bacteria in the interpretation of the results of experiments in chemotherapy The numerous references to the pertinent recent literature are valuable aid for the research worker

RAHN OTTO

Injury and death of bacteria by chemical agents. Normandy Missouri Biodynamica, 1945 183 p illus. 25 cm. (Biodynamica monographs, edited by B J Luyet. No. 3) $3 60 777

Contents (abridged) Part 1, The problem of the logarithmic order of death in bacteria: Order of death in multicellular versus uni-

BACTERIOLOGY

GENERAL

AMERICAN PUBLIC HEALTH ASSOCIATION

Diagnostic procedures and reagents technics for the laboratory diagnosis and control of the communicable diseases. Second edition. New York American Public Health Association 1945 549 p. illus. 24 cm. $4 00 769

Contents Culture media—stains, reagents and solutions, by A. P. Hitchens. The toxicity of dyes for certain bacteria, by E. K. Kline. The meningococcus (*Neisseria meningitidis*) by S. E. Branham. The gonococcus (*Neisseria gonorrhoeae*) by C. M. Carpenter Tularemia (*Pasteurella tularensis*) by G. D. Brigham. Brucellosis (*Brucella melitensis*, *Brucella abortus*, and *Brucella suis*), by A. P. Hitchens. *Hemophilus pertussis*, by P. Kendrick, G. McL. Lawson, and J. J. Miller Jr. The pneumococcus, by E. S. Robinson (revised by W D Sutliff) Hemolytic streptococci, by J. M. Coffey Bacterial food poisoning, by G. M. Dack. Typhus fevers and other rickettsial infections, by H. Welch and L. A. Bengtson. *Eberthella typhosa* and other bacillary bacteria of enteric disease, by M. B. Coleman. The diphtheria bacillus (*Corynebacterium diphtheriae*) by M. Frobisher J. The tubercle bacillus (*Mycobacterium tuberculosis*) by A. L. MacNabb. Examination of specimens for *Treponema pallidum*, by R. Gilbert. Serodiagnosis of syphilis, by R. Gilbert and E. Mahimer. Examination of cerebrospinal fluid for evidence of syphilis of the central nervous system, by R. Gilbert. Chancroid, lymphogranuloma venereum and granuloma inguinale, by R. S. Sanderson. Rabies, by T. F. Sellers and H. E. Carson. Pathogenic fungi, by W. D. Stovall and L. Ajello. Laboratory diagnosis of helminths and Protozoa, by H. W. Brown. Blood cultures, by C. G. Botts. The laboratory diagnosis of glanders, by W. A. Hagan. The laboratory diagnosis of anthrax, by W. A. Hagan. Trichinosis, by L. S. Headstrom. Infectious mononucleosis, by C. A. Stuart. The malaria parasites of man, by A. Wilcox. The diagnosis of cholera, by R. W. Linton. Appendix Amendment to the postal laws and regulations. Index.

Note. A carefully compiled handbook of accepted and standard procedures. Each paper was prepared by one or more outstanding specialists and was evaluated in manuscript by other experts serving as referees. The book is designed as reference manual for professional workers and technicians in medical and public health laboratories. Extensive lists of related literature accompany each paper. The first edition was published in 1941. The present edition is thoroughly revised and also new chapters have been added. A new edition is scheduled for publication in 1950.

BERGEY DAVID HENDRICKS

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CLIFTON CHARLES E AND OTHERS

Annual review of microbiology volume I by C. E. Clifton S Raffel and H. A. Barker Stanford, Calif Annual Reviews Inc., 1947 404 p. illus. 22 cm. $6 00 771

Contents: Morphology and cytology of Protozoa, by D H. Wenrich. Antigenic variation in Protozoa and bacteria, by J A. Harrison. Life cycle of malarial parasites, by C. G. Huff. Variation in phytopathogenic fungi, by C. M. Christensen, E. C. Stakman and J. J. Christensen. Variation in phytopathogenic viruses, by L. O. Kunkel. Some aspects of the problem of growth factors for Protozoa, by A. Lwoff. Bacterial metabolism, by D D Woods Nitrogen metabolism, by E. F Gale. Industrial fermentations, by M. J Johnson. Quaternary ammonium compounds, by O. Rahn and W P Van Eseltine. Antibiotics, by R. G. Benedict and A. F Langlykke. Chemotherapeutic agents, by E. M. Lourie. Immunochemistry by H. P. Treffers. Some aspects of active immunization, by J Freund. Medical and epidemiological aspects of enteric infection, by A. J. Weil. The Rickettsiae, by N H. Topping and C. C. Shepard. Respiratory viruses, by T Francis, Jr Indexes.

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DUBOS RENÉ JULES editor

Bacterial and mycotic infections of man. 101 illustrations, including 3 plates in color

involved. Ithaca, N Y Comstock Publishing Company Inc., 1946 763 p illus. 24 cm. $7 75 783

Contents. Introduction. Extracellular bacteria and insects. Specific bacteria associated with insects. Intracellular bacteriumlike and rickettsialike symbiotes. Rickettsiae. Yeasts and insects. Fungi and insects. Viruses and insects. Spirochetes associated with insects and ticks. Protozoa and insects (except termites) Protozoa in termites. Immunity in insects. Methods and procedures. References. Author index. Subject index.

Note: In effect this book is comprehensive survey and digest of all the data that has been published on its subject. The word "microbe" is taken in its broad sense true bacteria, rickettsiae, yeasts, fungi, spirochetes, protozoa and viruses are included. The word "associated" is likewise interpreted broadly to include relationships ranging from true symbiosis to those in which the insect or tick appears to act merely as mechanical carrier of the microorganism. Some idea of the comprehensiveness of the work is indicated by the fact that the bibliography which includes only references cited in the text, contains approximately 1700 references. The book is useful to any scientist interested in the subject, from student to specialist.

TEXTBOOKS

BURDON KENNETH LIVINGSTON

Textbook of microbiology Third edition revised. New York The Macmillan Company 1947 728 p illus. 22 cm. $4 00 784

Contents (abridged) Part One Elements of microbiology: Scope and character of microbiology History of microbiology Outstanding properties of the principal kinds of microbes. Microscopes and microscopical methods. Morphology of bacteria. General physiology of bacteria. Activities of nonpathogenic, saprophytic bacteria. Cultivation of bacteria—culture media and methods. Isolation and identification of bacteria. Growth characteristics of bacteria in laboratory cultures Part Two, Methods of destroying microorganisms and of controlling the spread of communicable diseases—sources and modes of infection. Part Three, Infection and resistance. Microbes and disease. Reaction of the body to infection—cellular defenses. Natural and acquired immunity Anaphylaxis or hypersensitiveness. Part Four Microbiology of important infectious diseases. Appendix. Index.

Note (1969) An introductory textbook designed primarily for use in nurses' training schools. It offers concise but fairly comprehensive presentation of the fundamentals of general and medical microbiology and the elementary phases of immunology and public health. This edition has been somewhat rewritten in parts and also rearranged so as to increase its effectiveness as text. There are several new illustrations and the reference lists have been revised.

HENRICI, ARTHUR TRAUTWEIN

The biology of bacteria an introduction to general microbiology Revised by Erling J Ordal. Third edition. Boston D C. Heath & Company 1948 577 p. illus (part col d) 23 cm. $5.50 785

Contents (abridged) A brief history of bacteriology The microscope and microscopy A survey of microbic life. The protozoa—the algae—the fungi—the bacteria—the ultramicrobes. The finer structure of bacterial cells. The growth and reproduction of bacteria. Heredity and variation in bacteria Ecology of bacteria. The cultivation of bacteria. The metabolism of bacteria. The death of bacteria—disinfection. Infection. Immunity Bacterial diseases of plants. Classification of bacteria. Eubacteriales. The actinomycetales. The molds Yeasts and yeast like fungi. The pathogenic protozoa. The spirochaetales. The rickettsial and virus diseases. Index.

Note. (1973) A successful textbook for college courses. It is concerned chiefly with the basic knowledge, and applications are mentioned only incidentally As the title indicates, the book is concerned with physiological aspects rather than taxonomic. In the present edition the general plan of the book is the same but there has been some rearrangement and considerable amount of rewriting. The chapter on microscopy for example, includes added material on the electron microscope and the use of ultraviolet and fluorescence microscopy Nomenclature and classification have been revised so as to conform to the fifth edition of Bergey's *Manual of determinative bacteriology*.

JORDAN EDWIN OAKES AND WILLIAM BURROWS

Textbook of bacteriology Fourteenth edition revised. Philadelphia W B Saunders Company 1945 909 p illus. (part col'd) 24 cm. $8.50 786

Contents (abridged) The history and development of bacteriology Methods of studying bacteria. Morphology cell structure, growth and chemical composition of bacteria. The effect of physical and chemical agents on bacteria. Bacterial physiology Bacterial heredity and variation. The classification of bacteria. The relation of bacteria to disease. The transmission of infection. Immunity—antigens, antibodies and the antigen-antibody reaction. The staphylococci. The streptococci. The pneumococci. The gram-negative pathogenic cocci (neisseria) the gonococcus and the meningococcus. The enteric bacilli. The cholera vibrio and related forms. Brucella. Pasteurella. The hemophilic bacteria. The anthrax bacillus. Clostridium—the spore-forming anaerobes. The glanders bacillus. Corynebacterium (the diphtheria bacillus) Mycobacterium. Medical mycology—the pathogenic actinomycetes, molds, yeasts and related microorganisms. The spirochetes. Medical parasitology by Richard J Porter. The rickettsiae. Virus diseases of man, by F B. Gordon. Bacteriophage. Index.

Note. (1974) An advanced text for medical and college students, wherein is emphasized the many applications of bacteriology in medicine and everyday life. This edition continues the plan of complete revision and rewriting undertaken in the 1941 volume. The earlier chapters on molds, yeasts, and actinomycetes have been replaced by new and longer chapter on medical mycology and the one on parasitic protozoa is replaced by more detailed discussion of medical parasitology There are also new sections on such topics as respiratory enzymes, antibiotic substances, iso-antigens and antibodies, epidemic kerato-conjunctivitis, etc. The majority of the illustrations are new and of excellent quality References are given in the form of footnotes.

MARSHALL MAX SKIDMORE

Applied medical bacteriology Philadelphia Lea & Febiger 1947 340 p illus. 24 cm. $4.50 787

Contents. Microscopy Sterilization and disinfection. Glassware. Culture media. Cultivation, isolation, and general technique. Use of laboratory animals. Serologic technique. Viruses, general technique. Yeasts and molds, general technique. Sanitation. Biologic products. Specimens. Classification. Diseases. Index.

Note: This text is designed for the use of students of bacteriology and others who must consider the subject in relation to disease. The material and form of presentation is intended to be adaptable to wide variety of applications and problems, such as those encountered by the clinician, the sanitary inspector, and the pathologist. The various organisms are discussed in relation to the specific diseases with which they are associated, and the preliminary descriptions of techniques, laboratory materials, and methods are concisely and simply presented under clearly marked headings.

RICE, THURMAN BROOKS

A textbook of bacteriology Fourth edition illustrated. Philadelphia W B Saunders Company 1947 603 p. illus. 24 cm. $6.50. 788

Contents (abridged) The history of bacteriology The place of bacteriology in medical progress. The morphology of bacteria. The means of studying bacteria. The detection of the biological activities of bacteria. The destruction of bacteria. Practical disinfection. How micro-organisms cause disease. How the body resists disease. The pyogenic cocci. The staphylococci. The streptococci. The pneumococcus. The gonococcus. The meningococcus. The colon-typhoid group of organisms. The dysentery bacillus The Brucella group. The Friedlander group. The new-milk group of organisms. The hemophilic group. The diphtheria bacillus The tubercle bacillus. The leprosy bacillus. The spore-bearing aerobes. The spore-bearing anaerobes. The hemorrhagic septicemia group. The glanders bacillus. The cholera vibrio. The spiral organisms. The rickettsia group. The filtrable viruses. The bacteriophage—microbic dissociation. The higher bacteria. The pathogenic yeasts and molds. The pathogenic protozoa. Antigens and antibodies. Tests and methods. Agglutinins and precipitins. Electrophoretic charge as related to immunologic reactions. The Wassermann reaction. Hypersensitiveness. The principles of specific immunization and treatment. The bacterial flora of the

normal body Chemotherapeutic and antibiotic agents. Appendices. Index.

Note. (1940) A presentation of bacteriology from the standpoint of its application in medicine and surgery Fundamental concepts and techniques of general application are reviewed briefly but adequately then the bacteriology of specific diseases is presented and such points as diagnosis, prognosis, etiology treatment, specific therapy prophylaxis and sanitary control are discussed for each disease. The book is designed particularly for medical college courses; but since it is written largely from the viewpoint of the practicing physician, it is useful as an office manual. In this edition the work is about forty pages longer than in the previous edition. Revisions and additions have been made in various places, but much of the added material pertains to tropical diseases and to the new antibiotic and chemotherapeutic agents.

SWINGLE DEANE BRET

General bacteriology revised by William G Walter Second edition. New York D Van Nostrand Company Inc., 1947 319 p. illus. 24 cm. $3.50 789

Contents: What are microorganisms? The rise of bacteriology The microscope in bacteriology Morphology of bacteria. Classification of bacteria. The use of cultures. Reproduction and growth of bacteria. The nutrition of bacteria. Bacterial products. Effects of environment on bacteria. Molds and their economic significance. Yeasts and yeastlike fungi. Bacteria of the soil. Bacteria in water. Bacteria in sewage disposal. Microorganisms in the air Bacteria in milk. Bacteria in milk products. The preservation of foods. Industrial microbiology The mechanism of infection. Immunity and serum reactions. Pathogenic bacteria. Viruses, bacteriophages, rickettsiae, and the pleuropneumonia group. Glossary Index.

Note. (1942) An introductory college textbook for courses taught with or without laboratory work. Some emphasis is placed on morphology and classification in order to give the student conception of bacteriology as basic biological science, but most of the book deals with practical techniques and applications. The book is profusely illustrated and the chapters are supplemented by review questions. In this edition, the classification has been revised and new material has been added on such topics as antibiotics, the use of aerosols in air disinfection, and the cultivation of microorganisms in chick embryos.

TANNER, FRED WILBUR, AND FRED WILBUR TANNER, JR.

Bacteriology a textbook of microorganisms. Fourth edition. New York John Wiley & Sons, Inc., 1948 625 p illus. 22 cm. $4.50 790

Contents: History and development of early theories. Systematic relationships of plant and animal groups. Living matter and the cell. Ultramicroscopic forms of life. Morphology of bacteria. Variability of microorganisms. Nomenclature and classification of bacteria. Molds. The yeasts and related organisms. The Protozoa. Action of physical agents on bacteria. Relation of chemical agents to bacteria. Mutual relationship—microbial associations. Nutrition and metabolism of bacteria. Growth of bacteria. Bacterial enzymes. Nitrogen metabolism (cycle); sulfur metabolism (cycle); carbon metabolism. Microorganisms in air. Water bacteriology Sewage treatment and bacteriology Bacteriology of milk and milk products. Industrial fermentations. Food preservation. Food infection and food poisoning. Relation of bacteria to disease. Transmission of infecting agents. Factors influencing infection. Modes of bacterial action. Protective substances—immune bodies, antibodies. Varieties of immunity Bacteria in plant diseases. Appendix Bacteriological literature. Glossary Index.

Note (1943) The new edition of this standard undergraduate textbook is the first to bear the name of junior author It is revised edition in the following respects general review and minor changes to bring the 1937 (third) edition up to date, new chapters on ultramicroscopic forms of life and variability of microorganisms added material on metabolism in the chapter on nutrition of bacteria.

ZINSSER HANS AND STANHOPE BAYNE JONES

Zinsser's textbook of bacteriology the application of bacteriology and immunology to the diagnosis, specific therapy and prevention of infectious diseases for students and practitioners of medicine and public health. Ninth edition. New York Appleton-Century Crofts Inc. 1948 992 p illus. 25 cm. $10.00 791

Contents (abridged) The general biology of bacteria and the general methods of bacteriology Infection and immunity Pathogenic microorganisms. The spirochetes. The pleuropneumonia group of organisms. Rickettsia and the rickettsioses. Diseases caused by filtrable viruses. Medical mycology Technical methods of bacteriology Immunology and serology Index.

Note. (1944) As in previous editions, this text is not only concerned with the biological nature of organisms but also with the medical and public health aspects. Thus, the book outlines the effects of bacteria and their products on living tissue, and gives detailed description of infection and immunization in both man and animals. This edition has been considerably revised and contains an expansion of material on sulfonamides, new section on antibiotics, and new chapter on pleuropneumonia-like organisms. Some 117 new illustrations including many electron micrographs have been added.

IMMUNITY

BOYD WILLIAM CLOUSER

Fundamentals of immunology Second edition, completely revised and rewritten. New York Interscience Publishers, Inc., 1947 503 p illus 24 cm. $6 00 792

Contents. Immunity and immunology Antibodies and antibody specificity Antigens. Cell antigens. Blood groups. Antibody-antigen reactions. Complement and complement fixation. Anaphylaxis and allergy Allergy and immunity: bacteria, viruses, parasites. Practical use of immunity Laboratory and clinical technic. Index.

Note: (1943) An introduction to the basic principles of immunology for medical students and research workers in the fields of chemistry and biology As in the previous edition emphasis is placed on serology but again methods of laboratory practice and some clinical applications are discussed. The treatment assumes the reader has some knowledge of organic chemistry and bacteriology This edition remains fundamentally the same as the first, but recent developments in the field have been incorporated into the text. Summaries are now given at the end of each chapter and the extensive lists of references have been brought up to date.

KABAT ELVIN ABRAHAM AND MANFRED M MAYER

Experimental immunochemistry with a foreword by Michael Heidelberger Springfield Ill. Charles C Thomas 1948 567 p. illus. 24 cm. $10 00 793

Contents (abridged) Part I, Immunological and immunochemical methodology: Precipitin reaction. Agglutination. Complement and complement fixation. Anaphylaxis and allergy Antibodies and their characterization. Part II, Applications and uses of quantitative immunochemical methods. Estimation of antigens. Cross reactions. Effects of chemical treatment in altering immunochemical properties of proteins and polysaccharides. Part III, Chemical and physical methods and special procedures used in immunochemistry: Kjeldahl nitrogen determination. Phosphorus estimation. Amino nitrogen determination. Acetyl determination. Estimation of uronic acid. Glucosamine estimation Nucleic acid determination. Estimation of protein with the Folin-Ciocalteu phenol reagent. Determination of protein concentration by density measurement. Estimation of enzyme activity Electrophoretic analysis. Ultracentrifugal analysis. Ultraviolet absorption spectra. Titration of proteins with acid and alkali. Dialysis and ultrafiltration. Extraction of antigens from microorganisms. Part IV Preparations: Crystalline serum albumin. Gamma globulin. Crystalline enzymes and enzyme precursors. Bence-Jones proteins. Purification of antibodies. Acetylated and malonyl proteins. *Phosphorylated* proteins. Diphtheria toxin. Baivin-type antigens. Blood group substances. Appendix. Index.

Note. The authors of this book define immunochemistry as "the study of the chemistry of antigens and antibodies and of the chemical basis of immunity and resistance However their book, as is implied in the title, is devoted chiefly to laboratory techniques and procedures which are useful to chemists doing analytical and experimental work in this field. Essentially it is well-organized survey of the techniques which have been reported in the literature. Many of the chapters include generalized discussions of particular technique or problem, and also details of specific procedures for analytical

determinations in the laboratory. There are good selected lists of references to related literature.

LANDSTEINER, KARL

The specificity of serological reactions. Revised edition. With a chapter on molecular structure and intermolecular forces by Linus Pauling. Cambridge, Mass. Harvard University Press, 1947. 310 p. illus. 21 cm. $5.00 794

Contents: Introduction. The serological specificity of proteins. Cell antigens. The nature and specificity of antibodies. Artificial conjugated antigens—serological reactions with simple chemical compounds. Chemical investigations on specific non-protein cell substances. Antigen-antibody reactions. Molecular structure and intermolecular forces, by Linus Pauling. List of textbooks, reviews, monographs, and surveys. Index.

Note: A classic statement of fundamental knowledge in the chemistry of immunology. The author received a Nobel Prize for his discovery of human blood groups. The book embodies the results of original experiments on antigens and serological reactions carried out by the author and his colleagues, and contains also selected material from the related literature. The new edition was undertaken because of the many significant advances in this rapidly developing field, and the text of it was complete at the time of the author's death in 1943. The general plan of the original was not altered, but important changes were made both to cover the new developments and to give fuller treatments of certain topics which were treated briefly or not at all in the 1936 edition. The chapter by Linus Pauling was added, and the bibliographies were revised.

SULZBERGER, MARION BALDUR, AND RUDOLF L. BAER, editors

Office immunology including allergy, a guide for the practitioner. Chicago. The Year Book Publishers Inc., 1947. 420 p. illus. 21 cm. (General practice manuals) $7.50 795

Contents: Common technics—diagnostic procedures, by M. B. Sulzberger, W. C. Spain and R. L. Baer. Common technics—prophylactic and therapeutic procedures, by M. B. Sulzberger, W. C. Spain and R. L. Baer. Immunology of infections, by A. Kanof and A. J. Weil. Immunologic principles of transfusion reactions—the Rh factor, by A. J. Weil and A. Kanof. Respiratory allergies, by W. C. Spain. Dermatologic immunology, by M. B. Sulzberger, R. L. Baer and N. M. Kanof. Immunologic management of spider, insect and snake bites, by M. B. Sulzberger, R. L. Baer, A. Kanof, and N. M. Kanof. Miscellaneous allergies, by W. C. Spain. Index.

Note: This is an up-to-date manual for practicing physicians on the subject of immunization against allergies and other more serious infectious diseases. It also contains precise and useful information on the diagnosis and treatment of these diseases. The stress is on simple, easily performed office tests and procedures rather than the more elaborate and complex laboratory and hospital methods. A feature is the listing of commercial sources for the various vaccines and serums required.

MEDICINE

GENERAL

ANDREWS EDMUND

A history of scientific English the story of its evolution based on a study of biomedical terminology New York Richard R. Smith, 1947 342 p illus 24 cm. $7.50 796

Contents (abridged) Indo-European philology Semantics the science of meanings. The history of medical terminology Pre-Hellenic influences. The Aryan heritage. Greek. Latin. Dead Latin. Arabic. French. English. Science vs. vogue German. The future. Bibliography Index.

Note An informal but not unlearned treatise. The author is Doctor of Medicine, and there is more emphasis on medical terminology than might be inferred from the title and table of contents. Viewed as philology it is rather light reading, but it is not to be overlooked by professional students of language. The index lists also every word discussed in the treatise—a feature that makes the book easy to use for quick reference.

BINGER CARL

The doctor's job New York W W Norton & Company Inc., 1945 243 p 21 cm. $3 00 797

Contents (abridged) Background and changes. Specialists and specialists. The choice of physician, medical fees and etiquette. The relationship of doctor and patient. Medicine and psychoanalysis. Psychiatry and medicine. Psychosomatic medicine or mind and body relationships. Stomach ulcer. Allergy asthma and [illegible]. High blood pressure. The cure and control of [illegible]. Contagious and chronic disease. The prevention of disease. Office practice, hospitals and outpatient departments. Socialized medicine or paying the piper. Past, present and future. Bibliography Index.

Note Here the author, a medical doctor, provides for lay readers an authoritative discussion of present-day methods and ideas regarding the cause and treatment of some common diseases. He also discusses the problems of doctor-patient relationships, the choice of physician, the family doctor versus the specialist, and recent developments in the field of psychosomatic medicine. Throughout the book effective use is made of illustrative anecdotes taken from the author's personal experience and from events in medical history. The work is the first winner of the Norton Medical Award which was established to encourage the writing of books for general readers on medicine and the medical profession.

FISHBEIN MORRIS

Medical writing the technic and the art. With the assistance of Jewel F Whelan Second edition. Philadelphia The Blakiston Company 1948 292 p. illus. 24 cm. $4.00 798

Contents An acceptable paper. Style. The subject and the material. Construction of the manuscript. Words and phrases. Spelling. Capitalization. Abbreviations. Numbers. Pharmaceutic products and prescriptions. Bibliographic material. Preparation of the manuscript. Illustrations. Tables and charts. Revision of the manuscript. Proofreading. Indexing. Abbreviations of names of periodicals. Index.

Note The material for this manual was compiled during the course of the work of the Editorial Department of the American Medical Association in preparing their various publications for the press. Although primarily a manual for the guidance of medical authors it contains material of interest to most scientific writers. Containing the usual features of any good style manual, it gives particular attention to the special problems of the writer on medical topics. This edition has been considerably changed and much material added.

FULTON JOHN FARQUHAR

Aviation medicine in its preventive aspects an historical survey New York Oxford University Press 1948 1[illegible]4 p illus 23 cm. (University of London. Heath Clark lectures 1947) $3.50 9[illegible]a

Contents [illegible] the history of oxygen [illegible] decompression [illegible] and [illegible] Man and the [illegible] problems of safety in flight. Index.

Note These lectures are devoted [illegible] to the development of the current knowledge of [illegible] human beings [illegible] effects from these causes are described [illegible] from research carried on during [illegible] World War [illegible] the development of the [illegible]. The [illegible] in the book [illegible] Contents [illegible] and [illegible] literature [illegible].

JOINT COMMITTEE OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES AND THE AMERICAN ASSOCIATION OF MEDICAL SOCIAL WORKERS

Widening horizons in medical education a study of the teaching of social and environmental factors in medicine 1945–1946 New York The Commonwealth Fund 1948 2[illegible]5 p 24 cm. $2 [illegible]5 [illegible]99

Contents Part [illegible] Introduction and [illegible] of [illegible]. Practical application in medical teaching. Conclusions and recommendations. Part [illegible] [illegible] and [illegible] of teaching methods and techniques. Role of the social worker in medical social teaching. Bibliography. Index.

Note An analysis and evaluation of the methods of teaching the social aspects of medicine to undergraduate students in United States and Canadian medical colleges. Case histories are included as an indication of the importance of the patient, and recommendations are made for improving existing teaching techniques. The monograph [illegible] medical social workers, medical [illegible] and the practicing physician.

KELLY EMERSON CROSBY

Encyclopedia of medical sources. Baltimore The Williams & Wilkins Company 1948 476 p [illegible]3 cm. $[illegible].50 800

Note A useful reference book whose purpose is to direct surgeons, medical practitioners, and medical historians to the original source descriptions of operations, methods, tests, etc. which are known by the names of their authors, or at least by the names of individuals associated with them in medical literature. In other words, it is a compilation of eponyms that can be used to identify and trace the origin of such terms as Babinski's sign, the Schick test, and Bier's method. The person whose name is identified with the particular term is identified as to full name, nationality, profession, and dates of birth and death. The eponym is then defined and a reference is made to the periodical article or other source in which it was given an early authoritative description.

METHODS IN MEDICAL RESEARCH Volume I Van R. Potter editor-in-chief Chicago The Year Book Publishers Inc., 1948 3[illegible]2 p. illus. 24 cm. $8.00 801

Contents (abridged) Section I, Assay of antibiotics, by Henry Welch, associate editor: Assay of penicillin potency Assay of streptomycin potency Assay of tyrothricin potency Assay of bacitracin potency Pyrogen tests for penicillin and streptomycin. Toxicity—safety tests for penicillin and streptomycin. Section II, Circulation—blood flow measurement, by Harold D Green associate editor Venous drainage recorders. Mean flow recorders. Pulsatile flow meters. Perfusion systems. Indirect methods for regional blood flow. Collateral circulation. Cardiac output and contractility Analysis of cardiovascular activity Section III Selected methods in gastro-enterologic research, by A. C. Ivy associate editor Section IV Cellular respiration, by Van R. Potter associate editor Index.

Note: The first volume published of series which is planned to offer periodically selection of original papers on currently important or newly developed methods and techniques useful in medical research. According to the preface, which is signed by the editorial board, the term "medical research will be interpreted broadly to include biochemistry physiology pharmacology bacteriology immunology biophysics, and radiobiology The present volume covers both laboratory techniques and instruments. The descriptions are specific and detailed and are intended for use by workers engaged in research at the professional level. There are frequent illustrations of laboratory apparatus and an adequate number of references to pertinent literature.

Miller Benjamin Frank

You and your doctor a frank discussion of group medical practice and other modern trends in American medicine. New York Whittlesey House, McGraw Hill Book Company Inc. 1948 183 p 21 cm. $2 75 802

Contents: The general practitioner. The practitioner's dilemma. Signs and symptoms. The pilot physician. Group medical practice. The modern hospital. Share the health. Freedom from emotional illness. Periodic medical checkups. The post-mortem. Your doctor's education. Medical research. Interstate medical care. National disaster service. Who should administer national medical care? W can provide good health for everyone.

Note: In this small volume the author attempts to explain to the general public the shortcomings of the medical service in the United States and to win its support for several suggested changes. The main points discussed are the advantages of group medical practice, the general practitioner's role in view of growing specialization, and the need for national system of medical care. Subsidized medical research and training, wide use of post-mortems, and establishment of national disaster service centers are among the features of the proposed development.

Miller, James Alexander, and others

Medical addenda related essays on medicine and the changing order New York The Commonwealth Fund 1947 174 p illus. 22 cm. $1 75 803

Contents: Preface, by Franklin R. Kirkbride. The doctor himself, by James Alexander Miller Psychosomatic medicine, by Lewis Hausman. Medical social work, by Mary Antoinette Cannon and Harriett M. Bartlett. Psychiatric social work, by Winifred W Arrington. Rehabilitation and convalescence, by Howard A. Rusk. Chronic disease, by Ernest P Boas.

Note. Supplementing earlier monographs in this series of the New York Academy of Medicine's Committee on Medicine and the Changing Order the present collection of essays completes the committee's consideration of medical service as whole. As previously the writing is for both the professional and the layman who are associated with or interested in current medical practice.

New York Academy of Medicine

Medicine in the postwar world, the march of medicine, 1947 New York Columbia University Press 1948. 109 p. 21 cm. (Lectures to the laity No 12) $2.00 804

Contents: Foreword, by George Baehr Introduction, by C P Oberndorf. The role of the medical man in war (The Lindsly R. Williams memorial lecture) by Norman T Kirk. The atom in medicine, by Arthur K. Solomon Are parents necessary? (The 97th anniversary discourse of the New York Academy of Medicine) by René A. Spitz. What the war experiences have taught us in psychiatry by Nolan D. C. Lewis. American pioneering in psychiatry by Howard W Haggard. Anti-infectious agents of natural origin (The George R. Siedenburg memorial lecture) by René J Dubos. Index.

Note Three of the six lectures in this volume on present-day medicine are devoted to problems of psychiatry and of human behavior The other three lectures deal with the part played by the 47,000 American doctors in the second World War the repercussions of atomic research upon medical science, and the use of antibiotic drugs for the control of the infectious diseases. This annual series of lectures is published for the especial benefit of such groups as ministers, teachers, lawyers, sociologists, social workers, and others whose interests touch closely upon medical investigation.

New York Academy of Medicine. Committee on Medicine and the Changing Order

Medicine in the changing order Report of the committee. New York The Commonwealth Fund, 1947 258 p. 21 cm. $2.00 805

Contents: Introduction, by Malcolm Goodridge. Origins of present problems in American medicine. Medicine and the changing order in recent decades. The health of the nation. Medical care in urban areas. Medical care in rural areas Extension of the public health services. The quality of medical care. Preventive medicine. The hospital. Nursing. Medical insurance—voluntary and compulsory The method and the goal. Index.

Note A report based on broad study of the current problems—particularly social and economic—of contemporary American medical education and practice. Many recommendations are made for improvements and changes that ill lead to more and better medical service for more people.

Richardson Henry Barber

Patients have families. New York The Commonwealth Fund 1945 408 p 24 cm. $3.00 806

Contents: Part I, The family as the unit of illness: A family as seen in the hospital. A family as seen from other angles. The family as the unit of illness. The family equilibrium. Different types of family equilibrium. Part II, The family as the unit of treatment: The family practitioner The family and the physicians' responsibility as viewed from the hospital. The cooperation of the physician and the psychiatrist. The case worker and the family unit. The medical social worker and the family unit. The public health nurse and the family unit. Part III, Present and future The family in wartime. The family unit in hospital practice and medical school teaching. The family unit as the subject of research. Appendix. Index of families and their members General index.

Note Maintaining that it is not enough for medical practice to stop at treating "the patient rather than the disease, the author calls for broader view one which recognizes family difficulties as the base of much illness, both physical and emotional. Based on study conducted jointly by Cornell University Medical College, the New York Hospital, and the Community Service Agency the book represents also the experience of the author in both medical and social science. Dr Richardson insists that since today's medical specialist no longer knows the patient and his family status, as did the now nearly outmoded general practitioner there must be marshaling of forces among doctor, psychiatrist, social worker public health nurse and others to produce really intelligent diagnoses and treatment. The full appendix includes outlines of suggested procedures and reports of the case histories discussed in the text.

Smith Austin editor

Medical research a symposium. 17 illustrations including 10 subjects in color Philadelphia J B Lippincott Company 1946 169 p illus. (part col'd) 24 cm. $5 00 807

Contents Fundamentals of medical research, by T Sollmann. Some practical aspects of research, by A. Smith. The laboratory by H. O. Calvery The manufacture and the development of new drugs, by R. DeWitt Clough. Medical research in the university medical school, by E. M. Boyd. Clinical research with notebook, by W C. Alvarez. The publicizing of scientific research, by M. Fishbein. Photography in medical research, by M. O. Bolend and H. L. Gibson. Index.

Note: The papers in this volume together give an informative, non-technical description of selected aspects of current medical research. The book is of interest to laymen as well as to persons with practical or professional interests. The philosophy of medical re-

search, its organization and aims in industrial and university laboratories, work that can be done by the practitioner [illegible] from research laboratories, and the marketing of new drugs are among the phases covered. The chapter on photography, one of the important modern techniques, contains excellent illustrative plates in color and black-and-white.

UNITED STATES OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT

Advances in military medicine made by American investigators working under the sponsorship of The Committee on Medical Research. Edited by E. C. Andrus, Tuckerman Day, associate editor Foreword by Alfred N Richards Volume I II. Boston Little Brown and Company 1948 2 v illus 22 cm. (Science in World War II) Two vols, $12.50 net 808

Contents (abridged) Volume I. Part One Medicine Venereal diseases, by J. E. Moore. Tropical diseases, by L. R. Farquhar. Part Two, Surgery: The prevention of infection in accidental wounds, by F. L. Meleney. Experimental wound healing, by E. L. Howes. The application of penicillin to surgical problems, by J. W. Hirshfeld. The problem of gas gangrene, by W. A. Altemeier and W. L. Furste. The burn problem, by O. Cope. New surgical plastics and hemostatics, by V. K. Frantz. Studies on wound ballistics, by E. N. Harvey. Part Three Aviation medicine. The effects of acceleration and their amelioration, by E. M. Landis. Visual problems, by W. R. Miles and D. W. Bronk. Motion sickness, by P. Bard. Altitude decompression sickness, by J. F. Fulton. Part Four Physiology: The history of plasma fractionation, by E. J. Cohn. Blood substitutes, by C. A. Janeway and J. L. Oncley. Volume II. Problems of nutrition, by J. B. Youmans and G. M. Guest. Protective clothing, by S. Robinson and H. S. Belding. Part Five Chemical warfare agents. Recent research on respiratory irritants, by R. W. Gerard. Protection and treatment of the skin exposed to blister gases, by M. B. Sulzberger. Part Six, Antipest agents. The development of new insecticides, by H. L. Haller and S. J. Cristol. The toxicology and mechanism of action of DDT in mammals, by R. A. Ormsbee. The development of new insect repellents, by R. O. Kibele. The development of new rodenticides, by R. A. Ormsbee. Part Seven, The synthesis of adrenocortical steroids, by T. F. Gallagher. Part Eight, Malaria. The synthesis of antimalarial drugs, by R. C. Elderfield. The clinical testing of antimalarial drugs, by J. A. Shannon. Part Nine Penicillin. Research in the development of penicillin, by K. B. Raper. Part Ten, Sensory devices, by G. W. Corner. Bibliography. List of contracts. Index.

Note These two volumes constitute a report to the general public of the vast program of medical research carried out under the auspices of the Committee on Medical Research, and of the resulting advances in medicine which occurred during World War II. Because of the wide variety of topics discussed, much technical detail has been omitted, and the treatment of each subject is comprehensive rather than exhaustive. Particular attention is of course given to those fields of medical research which have specific military applications. Periodical articles which report on the various projects sponsored by the Committee on Medical Research are cited in a 77-page bibliography. The series (see Index) of which this work is part, serves as an official record of the activities and accomplishments of the Office of Scientific Research and Development.

UNITED STATES PUBLIC HEALTH SERVICE

The ship's medicine chest and first aid at sea. Completely revised as a joint project of the United States Public Health Service and the War Shipping Administration. Washington D C Government Printing Office 1947 498 p illus. 24 cm. (United States. Public Health Service. Miscellaneous publication no 9) $3.50 809

Contents Preface. Historical introduction. The human body—its structure and function. Hygiene, sanitation, and preventive medicine. The sickbay and medicine chest. General nursing care. First aid and the emergency treatment of injuries. The classification and treatment of diseases. Medical advice by radio. Birth and death at sea. Appendix. Regulations governing medical relief of merchant seamen and others. Excerpts from regulations governing foreign quarantine. List of U. S. marine hospitals and other medical relief stations. List of disinfecting plant. Special safeguards for Harrison Law [illegible] drugs [illegible] [illegible] weights, measures, and approximate equivalents. Glossary. Index.

Note The latest revised edition of a work which was first published in 1881 [illegible] its predecessors [illegible] having no physician. It describes [illegible] and [illegible] of [illegible] the diseases and medical emergencies most commonly encountered at sea, the signs and symptoms by which they are recognized, and directions both for first aid and for follow-up or prolonged emergency treatment.

DICTIONARIES

DORLAND WILLIAM ALEXANDER NEWMAN

The American illustrated medical dictionary a complete dictionary of the terms used in medicine surgery dentistry pharmacy chemistry nursing veterinary science biology medical biography etc., with the pronunciation derivation and definition. With the collaboration of E. C L. Miller Twenty first edition with 850 illustrations including 233 portraits Philadelphia W B Saunders Company 1947 1660 p illus 24 cm. Plain, $8.00 thumb-indexed $8.50 810

Note (1709) One of the standard, comprehensive medical dictionaries. It defines the terms used in medicine and in fields allied to medicine. Definitions are brief but lucid. Pronunciation is indicated. Many new terms have been added in this edition, most of which grew out of developments during World War II. Many names of proprietary medicines which have dropped from the medical scene have been eliminated.

DORLAND WILLIAM ALEXANDER NEWMAN

American pocket medical dictionary containing the pronunciation and definition of all the principal terms used in medicine surgery, dentistry veterinary medicine nursing and kindred sciences, with over sixty extensive tables Eighteenth edition. Philadelphia W B Saunders Company 1946 1061 p. 16 cm. $2.50 thumb-indexed $3.00 811

Note (2012) A standard abridged lexicon. Eight hundred and seven new words were added to this edition, bringing the total number to over 33,000. Additions were made from such fields as biochemistry, pharmacy, and tropical medicine. Certain changes were made in order to make the terminology conform as closely as possible to the American Medical Association's *Standard nomenclature of disease and operations*.

GOLDBERG MORRIS

English Spanish chemical and medical dictionary comprising terms employed in medicine surgery dentistry veterinary biochemistry biology pharmacy allied sciences and related scientific equipment. New York McGraw Hill Book Company Inc., 1947 692 p. 23 cm. $10 00 812

Note An excellent dictionary which gives not only the Spanish equivalents of English terms, but also definitions in Spanish. Thus the entry under dosimetry reads "dosimetry dosimetría, f determinación exacta de las dosis, sistema terapéutico basado en la administración de los alcaloides en forma de gránulos de dosis mínimas a intervalos definidos. The number of words for which equivalents are given is about 12,000. Medical terms predominate, but there is a fair number of chemical terms.

TAYLOR NORMAN BURKE editor

Stedman's practical medical dictionary of words used in medicine with their derivation

and pronunciation including dental, veterinary chemical botanical, electrical life insurance and other special terms anatomical tables of titles in general use the terms sanctioned by the Basle anatomical convention the new British anatomical nomenclature pharmaceutical preparations official in the U S and British Pharmacopeias or contained in the National formulary and comprehensive lists of synonyms. Edited by Norman Burke Taylor in collaboration with Allen Elsworth Taylor Sixteenth revised edition with etymologic and orthographic rules Baltimore The Williams & Wilkins Company 1946 1291 p. illus. (part col d) 24 cm. $7.50 813

Note (3013) A standard work that has held place as one of the world's standard dictionaries of medical terms for many years. It provides relatively full definitions, and indicates the etymology and pronunciation of most of the words defined. Hundreds of new words, especially from the fields of tropical medicine, military medicine, physiology and biochemistry have been added in this edition, and some obsolete terms have been eliminated. The useful introductory section on etymology has been rewritten and expanded from four to twenty pages in length.

HISTORY

ACKERKNECHT ERWIN HEINZ

Malaria in the Upper Mississippi valley 1760–1900 Baltimore The Johns Hopkins Press, 1945 142 p illus. 26 cm. (Supplements to the Bulletin of the history of medicine. Henry E. Sigerist, editor Genevieve Miller associate editor No 4) $2.00 814

Contents (abridged) Introduction. The rise and fall of malaria in the Upper Mississippi valley Possible factors for the disappearance of malaria from the Upper Mississippi valley: Population movements. Clearing, cultivation and drainage. Prosperity Housing. Screening. Food. Cattle breeding. Mosquitoes. Quinine. The evolution of quinine treatment in the United States and the Upper Mississippi valley during the 19th century Climate and weather Some remarks on malaria and history Alphabetic list of books and articles quoted.

Note: This detailed study of the history and epidemiology of malaria in states bordering the Upper Mississippi emphasizes economic and social development as factors in the rise and then almost complete disappearance of malaria in these states. In spite of the inadequacies of existing reports the author has produced revealing picture of the background and course of the malaria epidemics in this area. Charts and population maps illustrate the relationship between population movements and the decline of the epidemic.

BEAUMONT WILLIAM

William Beaumont's formative years two early notebooks 1811–1821 with annotations and an introductory essay by Genevieve Miller New York Henry Schuman 1946 87 p. illus 24 cm. $6 00 815

Contents: List of illustrations Introduction. Part I: Beaumont's medical notebook. Notes. Part II. Beaumont's general notebook. Notes. Index

Note: William Beaumont, born in Lebanon, Connecticut, in 1785 is best known for his direct observations of the processes of digestion on the person of Alexis St. Martin. This volume reproduces the material contained in two of his notebooks which were kept during the years 1811 to 1821 One contains Beaumont's medical notes and observations, the other consists of his personal notes of non-medical nature. Together they provide an insight into the status of American medical knowledge during period in which the war of 1812 occurred, and first-hand account of American frontier life of that time.

CASTIGLIONI, ARTURO

A history of medicine. Second edition, revised and enlarged. Translated from the Italian by E. B Krumbhaar New York Alfred A. Knopf 1947 1192 p. illus. 27 cm. $12.50 816

Contents (abridged) Medical thought in its historical evolution. Empiric, demonistic, animistic, magic medicine. Old Egyptian medicine. The medicine of the people of Israel. Cuneiform codifications of sanitary laws. The medicine of ancient Persia and India. Systematic theories. Systems of scholastic medicine. The medicine of ancient Greece. The temples and cult of Aesculapius—the Greco-Italian schools—the dawn of scientific medicine. The golden age of Greek medicine. Hippocratic medicine—the Alexandrian school. Beginnings of anatomical and physiological studies. The Latin concept of medicine and sanitary legislation. Christian dogmatic medicine. The Byzantine school. Arabian medicine. Lay medicine. Renaissance of classic doctrines. From monastic medicine to the lay medicine of Salerno. The universities and humanism. The Renaissance The revival of anatomy and physiology The seventeenth century Dawn of scientific liberty Biological and experimental trends in medicine. The eighteenth century First half of the nineteenth century. The cell doctrine. The second half of the nineteenth century Clinical medicine based on the fundamental sciences. Growth of the specialties. The twentieth century Bibliography Index of subjects. Index of persons.

Note. A comprehensive, well balanced account of the evolution of medical theory and practice from earliest times to the present. The author devotes about equal attention to medical ideas, medical facts, and medical personages. Although text of the entire volume was revised for this revision, the major change made was the revision and expansion of the treatment of the modern period—1840 to the present—with the medical work of the recent war years receiving particular emphasis. There are 304 illustrations and 45 pages of bibliography The author was formerly Professor at the University of Padua and is now Research Associate in the History of Medicine at Yale.

EDELSTEIN EMMA JEANNETTE (LEVY) AND LUDWIG EDELSTEIN

Asclepius a collection and interpretation of the testimonies. Baltimore The Johns Hopkins Press 1945 2 v 26 cm. (Johns Hopkins University Institute of the History of Medicine Publications. Second series Texts and documents Vol. II) $7.50 817

Contents: Volume I, A collection of the testimonies: Legend. Descendants Deification and divine nature. Medicine. Cult. Images. Sanctuaries. Index locorum. Volume II, Interpretation of the testimonies: The hero Asclepius. The god Asclepius. Temple medicine. Cult. Images. Temples. List of abbreviations. Index of testimonies. Index of names.

Note. In this scholarly work the references to Asclepius and the Asclepian cult which are found in extant Greek and Latin literature have been collected and are discussed The allusions or "testimonies" are collected and classified in the first volume. In each instance reference is given to the source, and the passage is quoted in the original language and also in English translation. The second volume is an historical and critical study based on the testimonies, of the hero and the god Asclepius, and of his significance to medicine. The work is of value not only to students of the history of medicine, but to students of the history of religion and of civilization as well.

FISHBEIN MORRIS

A history of the American Medical Association 1847 to 1947 with the biographies of the presidents of the Association, by Walter L Bierring and with histories of the publications, councils bureaus and other official bodies. Philadelphia W B Saunders Company 1947 1226 p. illus. 25 cm. $10 00 818

Contents (abridged) The founder of the American Medical Association, by N. S. Davis. The history of the American Medical Association, by M. Fishbein. Recipients of the distinguished service medal, by M. Fishbein. Biographies of the presidents of the Ameri-

can Medical Association by W. L. Bierring. Councils and bureaus of the American Medical Association, by various authors. Publications of the American Medical Association, by various authors. Appendices: Sessions and presidents of the Association. Members of the board of trustees. Membership of the Council on Medical Education and Hospitals since the origin of the council. Dates in the history of the Council on Medical Education and Hospitals. Sessions and attendance of the Association. Members of the Judicial council. Index of persons. [illegible]

Note Essentially this work is a reference book [illegible] about the Association activities and its officers. Dr Fishbein's history occupies approximately the first 340 pages of the volume but even it is episodic and more suitable for consultation than for continuous reading. The biographical section contains sketches of [illegible] of the men who have served as presidents of the Association. For each is given a portrait and an outline of his life in which the emphasis is on his medical activities. The separate description of the organization and work of the various councils and bureaus of the Association contains much information which is not readily available elsewhere.

FRIEDENWALD HARRY

Jewish luminaries in medical history and a catalogue of works bearing on the subject of the Jews and medicine from his private library. Baltimore The Johns Hopkins Press 1946 199 p illus 24 cm $3.00 819

Note The essay that gives this book its title occupies only [illegible] of its pages and was originally delivered as a lecture at Johns Hopkins University in 1933. It outlines the major contribution of Jews to medicine and mentions [illegible] outstanding men. The remainder of the volume is devoted to the catalogue mentioned in the title.

JONES WILLIAM HENRY SAMUEL

Philosophy and medicine in ancient Greece Baltimore The Johns Hopkins Press 1946 100 p 26 cm. (Supplements to the Bulletin of the history of medicine Henry E Sigerist editor Genevieve Miller associate editor No 8) $2.00 820

Contents (abridged) Section [illegible] The pre-Hippocratic and Hippocratic [illegible] Section [illegible] Hypotheses in Greek thought. Philosophy and medical etiquette. Section [illegible] Introduction to *Ancient medicine*. Text translation and commentary. Authorities.

Note A critical analysis of the concepts which dominated Greek thought on medicine and physiology during the century between the founding of the Pythagorean school and the writings of Aristotle. The book *Ancient medicine* from the Hippocratic "Corpus medicorum Graecorum" which the author considers of great importance in this connection, is quoted almost in its entirety in the Greek version and in the author's translation. The monograph will be of particular interest to students of Greek philology and philosophy and to medical historians. A knowledge of Greek language and philosophy will facilitate an understanding of the discussion.

MAJOR RALPH HERMON

Classic descriptions of disease with biographical sketches of the authors. Third edition Springfield Illinois Charles C Thomas 1945 679 p illus. 26 cm. $7.50 821

Contents (abridged) Introduction. Hippocrates. I, Infectious diseases. The theory of infection. Syphilis. Plague. Yellow fever. Diphtheria. Typhus fever. Rheumatic fever. Hodgkin's disease. Diseases of metabolism. Diabetes mellitus. Thyroid disease. III, Lead poisoning. IV, Diseases of the circulatory system. Heart block. Aortic insufficiency. Pericarditis. Angina pectoris. Aneurysm. Diseases of the blood. Pernicious anemia. Purpura. VI, Kidney disease. Chronic nephritis. VII, Respiratory disease. Cheyne-Stokes respiration. Lobar pneumonia. Asthma. VIII, Deficiency diseases. Scurvy. Rickets. Beriberi. IX, Allergic diseases. Hay-fever. X, Diseases of the digestive tract. Peptic ulcer. Cirrhosis of the liver. Gallstones. Appendicitis. Bibliography. Index.

Note (1939a) A notable anthology of medical history. It consists of selections from medical writing—ancient texts, books, articles, and case records—in which significant discoveries or other advances were first announced or which are interesting because they depict the state of knowledge of a disease or describe a medical technique of a specific period. The typical excerpt is about one page in length but some are longer and many are shorter. Concise biographical sketches and portraits of the authors are included. The [illegible] in the [illegible] of the [illegible] several new sections and [illegible] of the biographical sketches.

METTLER CECILIA CHARLOTTE

History of medicine a correlative text arranged according to subjects Edited by Fred A Mettler With 16 illustrations Philadelphia The Blakiston Company 1947 1215 p. illus 24 cm. $8.50. 822

Contents (*abridged*) Anatomy and physiology to the end of the [illegible]. Anatomy in the modern period. Physiology in the modern period. Pharmacology. Pathology and bacteriology. Physical diagnosis. Medicine. Surgery and [illegible]. [illegible] Obstetrics, gynecology and [illegible]. Conclusion. Index of persons. Index of subjects.

Note A unique work in that it [illegible] by its arrangement [illegible] the [illegible] medical [illegible] Many of these [illegible] The organization is by [illegible] the [illegible] the arrangement is [illegible] each branch of medicine [illegible] from [illegible] through the general—the nineteenth century. [illegible] has been [illegible] references are given [illegible] As a work devoted to [illegible] in medical courses, the work is [illegible] reference book.

MULLETT CHARLES FREDERIC

Public baths and health in England 16th–18th century Baltimore The Johns Hopkins Press 1946 85 p 26 cm. (Supplements to the Bulletin of the history of medicine Henry E. Sigerist editor Genevieve Miller associate editor No 5) $1.50 823

Contents Public baths and health in England, 16th–18th century. Bibliography. Index of names of [illegible] Index of spas.

Note Essentially a bibliographic essay on the English spas in the 16th to 18th centuries. The text offers brief surveys of the rise [illegible] and articles on the subject, starting with the first English treatise on baths in 1562. The 211 references cited in the bibliography are keyed to the text proper. Primarily of interest to students of the history of medicine, the monograph also sheds some light on the social aspect of the period.

PETERSEN WILLIAM FERDINAND

Hippocratic wisdom for him who wishes to pursue properly the science of medicine a modern appreciation of ancient scientific achievement. Springfield Ill. Charles C Thomas 1946 263 p. illus 22 cm. $5.00 824

Contents The poles of the earth. Season and erysipelas. Anemia. Reproduction—The dancer lost her baby. Epilepsy and hydrophobia. The medical [illegible] Pneumonia, pleurisy, empyema. Phthisis. The patient who lived on Broadway. In the surgery. The art. Fractures—The [illegible] Fractures and dislocation. Theory. The cosmic concept. The unstable equilibrium. Resumption. Too much and too early. The era. Le miracle grec. Appendix. Glossary. Index of illustrations. Index of contents.

Note In the main part of his book extensive quotations from Hippocratic texts are interspersed with additions and discussion by Dr Petersen. The appendix—which is more than 40 pages in length—consists largely of explanatory notes and accounts of contemporary medical observations and cases that parallel observations in the Hippocratic texts. The book's chief purpose is to demonstrate to medical students and young physicians the significance and pertinence of Hippocrates to the ethics and philosophy of modern medicine.

ROSEN GEORGE

Fees and fee bills some economic aspects of medical practice in nineteenth century

America. Baltimore The Johns Hopkins Press, 1946 93 p 26 cm (Supplements to The Bulletin of the history of medicine, Henry E. Sigerist, editor Genevieve Miller associate editor No 6) $1.50 825

Contents Early fee bills. Reasons for the origin of fee bills. Economic problems of the medical profession. Fees during the 'thirties. Medical charges in eastern cities. Rules for professional conduct in pecuniary matters. Some fees in Vermont, New York and Connecticut in 1843. Fees and economic problems in the southwestern states. Medical charges during the middle of the century. Economic problems and social controls of the medical profession. Fee bills and price changes. Medical prices during the Civil War. A fee table for specialists. Medical price levels during the 'eighties and 'nineties. Conclusion. Index of medical societies.

Note. A brief survey of American medical prices reflected in the tables of charges stipulated by number of medical societies in the period from 1816 to 1891. The lists, which are quoted verbatim, are revealing not only with regard to the economic situation of the medical profession during that period, but also with regard to the general cost of living, credit allowed, economic differences between urban and rural areas, etc. By pointing out those items in the fee bills which might be indicative of the growing specialization, development of new medical instruments, procedures, and professional morale, the author has hoped to stimulate further research into economic medical history in the United States.

SHRYOCK, RICHARD HARRISON

American medical research, past and present. New York The Commonwealth Fund, 1947 350 p 21 cm. (The New York Academy of Medicine. Committee on Medicine and the Changing Order Monograph studies) $2.50. 826

Contents Preface, by John F Fulton. Introduction. Formative influences. Early support of research, 1840–1895. The changing economic and social background. The era of private support, 1895–1940. Research trends. Research fields Public relations. Public support. The future. Index.

Note In this book considerable amount of factual information is buttressed by the author's scholarship and wide acquaintance with our national culture to make this valuable addition to the social and economic, as well as the medical, history of the United States. The story of medical research before 1900 is by no means slighted, but its accelerating expansion since Welch's early days at Johns Hopkins, its present status, and its future prospects constitute the bulk and the real value of the book. Socio-economic implications, involving especially finance and control, are presented with careful objectivity but considerable challenge. Thoroughly documented.

SHRYOCK RICHARD HARRISON

The development of modern medicine an interpretation of the social and scientific factors involved. New York Alfred A Knopf 1947 457 p illus. 22 cm. $5.00 827

Contents First attempts to establish physical science, 1600–1700. The partial failure of physical science, 1700–1800. Social factors in medical lag after 1700. Renewed progress toward an objective science, 1750–1800. Early contributions of physics and physicians to the public welfare, 1750–1800. Science in romantic age, 1800–1850. Medicine and the basic sciences. Medicine, mathematics, and the social sciences. The emergence of modern medicine, 1800–1850. The influence of French medicine in Europe and America. Modern medicine in Germany 1850–1880. Medicine and the public health movement, 1800–1880. Public confidence lost. The triumphs of modern medicine, 1870–1900 Further progress and some of the consequences. Public confidence regained. A delayed advance against mental disease. Practice in changing society 1900–1930. American experience. Some contemporary questions. Index.

Note This scholarly study traces the advance of scientific medicine from the close of the Renaissance to the present, stressing especially the relationship of medical thought and practice to contemporary scientific and social attitudes. It is shown that the predominant philosophy of any given age determines the contemporary concept of healing, and that not until the scientific revival in early nineteenth century France did "modern medicine really take form. That form has developed into the medical science of today in harmony with general scientific and social progress and has been especially influenced by German methods of investigation, by the emphasis on bacteriological studies, and by the opportunities afforded by twentieth century research. An earlier edition of the work (University of Pennsylvania, 1936) was entitled *The development of modern medicine*. This edition has been extensively rewritten and the type has been reset.

STERN, BERNHARD JOSEPH

American medical practice in the perspectives of a century New York The Commonwealth Fund 1945 170 p 21 cm. (New York Academy of Medicine. Committee on Medicine and the Changing Order Studies) $1.50 828

Contents Social and economic changes in American life. The expanding horizons of medicine. The specialist and the general practitioner. The supply and distribution of physicians. The patient load in medical practice. The incomes of physicians. The distribution of medical services. Appendix: The effect of recruitment on the supply of physicians in civilian areas. Index.

Note: A short historical sketch whose chief purpose is to familiarize physicians, and others concerned with the problems of contemporary medicine, with some of the origins of these problems. The author traces the evolution of the social and economic forces in the world today revealing the effect which the growth of machine production and industrial urbanization has had on health. He sketches the concurrent growth of medicine, the increasing costs of its services, the increasing duration and costliness of medical education, the growth of specialization, the development of the modern hospital, and surveys the present distribution of medical care.

WILLIUS FREDRICK ARTHUR, AND THOMAS J DRY

A history of the heart and the circulation. Philadelphia W B Saunders Company 1948 456 p illus. 24 cm. $8 00 829

Contents (abridged) The chronologic presentation of knowledge relating to the heart and circulation 5000 B. C. to 1925 A. D Special biographies Hippocrates (c.460–c 377 B. C.) Ibn an-Nafis (c.1210–1288) Michael Servetus (1509–1553) Andrea Cesalpino (1519–1603) William Harvey (1578–1657) Marcello Malpighi (1628–1694) John Baptist Morgagni (1682–1771) Joseph Leopold Auenbrugger (1722–1809) William Withering (1741 1799) René-Théophile-Hyacinthe Laënnec (1781–1826) Joseph Skoda (1805–1881) Sir Thomas Lauder Brunton (1844–1916) Wilhelm Konrad Roentgen (1845–1923) Francis Henry Williams (1852–1936) Rudolph Matas (1860–) Willem Einthoven (1860–1927) Karel Frederik Wenckebach (1864–1940) Sir James Mackenzie (1853–1925) Sir William Osler (1849–1919) Sir Thomas Lewis (1881–1945) The chronologic presentation of data according to subjects. Anatomy of the heart and circulation Cardiac arrhythmia. The coronary vessels and their diseases Electrophysiology and electrocardiography Heart block. Milestones in medical education. The pericardium and its diseases. Physiology of the heart and circulation. Surgery of the heart and blood vessels. Therapy of the heart and circulation. Index of personal names Index of subjects.

Note: In tracing the development of knowledge relating to the heart and circulation the authors of this volume have used three methods of approach First, they outline in narrative form the history of medicine from 5000 B. C. to 1925 A. D with special reference to the progress made in understanding the cardiovascular system. Second, they provide biographical sketches of twenty individuals whose work has profoundly affected the growth of this field f knowledge. Third, they summarize chronologically the outstanding developments in eighteen branches of the subject. Because of this specialized arrangement and the inclusion of numerous portraits, the book is valuable reference tool in the field of medical history

GENERAL TEXTS

ADVANCES IN INTERNAL MEDICINE. William Dock and I. Snapper editors. Volume II. New York Interscience Publishers, Inc., 1947 642 p. illus. 24 cm. $7 50 830

Contents: Interpretation of the ventricular complex of the electrocardiogram, by F N Wilson, F F Rosenbaum and F D Johnston. Circulatory failure studied by means of venous catheterization, by J. McMichael. A discussion of angiocardiography and angiography by M. L. Sussman and A. Grishman. The surgical treatment of hyper-

tension, by K. S. Grimson. Surgical treatment of tumors and chronic inflammation of the lung, by J. W Strieder. Progress in the development of insecticides for prevention of insect-borne diseases, by J S. Simmons. Physiologic and medical aspects of aviation and deep sea diving, by A. R. Behnke. Penicillin treatment of subacute bacterial endocarditis, by G. Bachr and L. E. Gerber Use of penicillin in infections other than bacterial endocarditis, by M. Finland. Problem of the rhesus antigen in medicine, by A. S. Wiener Pernicious anemia and other megaloblastic anemias, by L. S. P Davidson and L. J Davis. Nutritional requirements in disease, by C. M. MacBryde and R. Elman. Nutrition and nutritional diseases in the Orient, by I. Snapper Author index. Subject index. Cumulative index, Volumes I–II.

Note: (2049b) As in the first volume of the series, recent developments are summarized and references are given to the source articles. The papers are not, however mere abstracts but are long enough to convey the significance and most of the results described in the original publications. The volume is addressed to general practitioners, internists, and specialists who wish to keep up in a general way with developments in this branch of medicine.

AMERICAN MEDICAL ASSOCIATION
A.M.A. interns manual. Philadelphia W B Saunders Company 1948 201 p 19 cm. $2.25 831

Contents. Internships and residencies—general information. What hospitals expect of interns. Choice of an internship. Relation between hospital and intern. Subsequent medical careers. Clinical and laboratory data. Drug administration. Materia medica—useful drugs. Acute poisoning; diagnosis and treatment. Diet and nutrition. Physical medicine. Lawful scope of intern practice. The American Medical Association. Index.

Note: A concise handbook of useful information for the newly appointed hospital intern. The volume is designed to fit the pocket and is intended to supplement but not supplant the hospital rule book. The present work represents an extensive revision of the edition which appeared in 1938.

BIERRING WALTER L. editor
Rypins medical licensure examinations topical summaries questions and answers. Sixth edition, containing for the first time a chapter on psychiatry also numerous text changes throughout incorporating current advances under the editorial direction of Walter L Bierring with the collaboration of a review panel. Philadelphia J B Lippincott Company 1947 690 p illus. 24 cm. $7.50 832

Contents: The philosophy of examinations. Part One, Basic medical sciences Anatomy Physiology Chemistry Bacteriology Pathology Pharmacology Part Two, Clinical sciences Surgery Medicine. Obstetrics and gynecology Hygiene and preventive medicine. Scope and goal of psychiatry Index.

Note Although the chief use of this work is as a review book in preparing for licensing examinations of medical licensing authorities in the various states of the United States of America, it is not a compilation of typical questions and answers. Rather it is a compact survey of eleven major medical subjects to enable the student to review and organize the knowledge he already has Each subject is presented in a separate summary which is followed by an extensive list of questions outlined thereon. The material has been prepared by an experienced medical examiner assisted by a panel of ten medical teachers and clinicians. The first four editions of the work, 1913 to 1939 were written and revised by the late Harold Rypins, M D. the 5th and 6th, by the present editor

BLUMER, GEORGE, editor
The therapeutics of internal diseases Chicago Wilcox & Follett Co 1946 5 v illus. 25 cm. $75.00 per set. 833

Contents (abridged) Volume I, Section I, General therapeutics Nutrition and dietetics, by A H. Smith Medical climatology by R. S. Fisus The principles of spa therapy by E. M. Smith. Heat therapy by H F Wolf. Light therapy by H. F Wolf Electrotherapy by H. F Wolf Clinical application of physical therapy by H F Wolf. Principles of radiotherapy by H B. Hunt Occupational therapy by W R. Dunton, Jr The therapeutic use of gases, by A. L. Barach. The principles of endocrine therapy by K. W Thompson. The principles underlying specific serum therapy and the technic of its administration, by M. D Eaton. The principles underlying bacteriophage therapy and the technic of its use, by M. D. Eaton. The principles underlying treatment in psychiatry by V G. Mather and W T Brown. Section II, Special therapeutic technic Oral medication, by W J. Bruckner Parenteral therapy by W J Bruckner Intravenous therapy by W J. Bruckner Blood transfusion by W J. Bruckner. Index. Volume II, Section I, Pharmacology and toxicology: Pharmacology and the therapeutic action of drugs, by L. S. Goodman. Toxicology by L. S. Goodman. Section II, Specific therapy The care of the patient, including the management of convalescence, by F W Palfrey Section III, Infectious diseases: The virus diseases, by J R. Paul, G. Klatskin and M. E. Howard. Spirochetal and fusospirochetal infections, by F Wise G. D Astrachan, J Wolf and G. Blumer The rickettsioses, by G. Blumer The mycobacterioses, by E. N Packard, H. E. Hasseltine, and W T Longcope. The bacillary infections, by J H. Musser and P H. Jones, Jr The coccal infections, by M. Finland, C. S. Keefer and E. H. Place. Index. Volume III, Diseases due to fungi, by D T Smith. Metazoan diseases, by E. C. Faust. Protozoan diseases, by C. F Craig. Diseases due to physical agents, by E. A. Lawrence and H. S. Martland. Pre- and postoperative treatment—traumatic shock—acute intestinal obstruction—increased intracranial pressure, by M. A. McIver. Treatment of diseases of the lower respiratory tract, by D S. King. Treatment of diseases of the blood and lymph vessels, by I. S. Wright. Treatment of heart disease and heart failure, by H. M. Marvin. Index. Volume IV Diseases of the mouth and pharynx, by A. J. Sullivan. The treatment of diseases of the esophagus, by C. L. Jackson. Diseases of the intestines, by P W Brown. Treatment of diseases of the rectum and anus, by F C. Yeomans. Diseases of the biliary tract, by J. R. Twiss. Diseases of the genito-urinary organs, by R. S. Ferguson and R. S. Hotchkiss. The nonoperative treatment of gynecologic diseases, by L. K. Musselman. Treatment of Bright's disease—nephrosis, nephritis and hypertension, by H. O. Mosenthal. Diseases of the blood and blood forming organs, by R. Isaacs Diseases of the locomotor system, by J S. Barr and C. L. Short Index. Volume V Diseases of the nervous system, by E. Houston Merritt. Treatment of specific psychiatric disturbances, by W T Brown and V G. Mather Diseases of metabolism, by A. Marble. Diseases of the endocrine glands, by H. H. Turner The vitamins in therapy by D. T Smith and S. G. Smith Allergy by W S. Burrage. The treatment of common skin diseases, by E. L. Persons. Chemotherapy with sulfonamide drugs, by L. S. Goodman. General index.

Note: An encyclopedic reference book on modern therapeutic techniques. It is designed for clinical guidance of all practitioners, but should be of especial value to general practitioners, working in small communities remote from adequate medical libraries Generally speaking, each paper presents a compact, practical statement of accepted practices in diagnosis and treatment and is accompanied by a list of selected references to the related literature. Illustrations are few and of poor quality

CECIL RUSSELL LA FAYETTE, editor
A textbook of medicine with the assistance of Walsh McDermott and Harold G Wolff associate editor for diseases of the nervous system. Seventh edition illustrated Philadelphia W B Saunders Company 1947 1730 p illus. 26 cm. $12 00 834

Contents (abridged) The infectious diseases: Virus diseases. The rickettsial diseases. The bacterial diseases. The mycoses. Spirochetal infections. Protozoan infections. Metazoan infections. Diseases of doubtful or unknown origin. Diseases of allergy Diseases due to physical agents. Diseases due to chemical agents. The intoxications. Deficiency diseases. Diseases of metabolism. Diseases of the digestive system The stomach. The intestines The liver The pancreas. The peritoneum. Diseases of the respiratory system The nose. The larynx. The bronchi. The lungs. The pleura. The mediastinum. The diaphragm. Diseases of the kidneys. Diseases of the spleen and reticulo-endothelial system. Diseases of the blood. Diseases of the cardiovascular system The heart The arteries The peripheral vessels. Diseases of the ductless glands: The thyroid gland. The hypophysis. The adrenal glands. The thymus gland. The parathyroid glands. The pineal gland The sex glands. Diseases of the locomotor system The muscles The joints. The bones. Diseases of the nervous system. Index.

Note: (2034) One hundred sixty-two teacher specialists have collaborated to prepare this text for medical students and reference manual for practicing physicians. Diseases are discussed from the viewpoint of definition, epidemiology etiology bacteriology morbid anatomy pathology symptoms, diagnosis, treatment, prognosis, and prophylaxis. Bibliographies follow the discussion of each disease. This edition has been thoroughly revised and includes, among others, new articles on drug allergy vitamin A, E, and K deficiencies, hemoglobinuria, diphtheric polyneuritis, headache, homifacial spasm.

Such subjects as virus diseases, herpes simplex, foot and mouth disease, streptococcal infections, diphtheria, cholera, leprosy syphilis, alcoholism, diabetes mellitus, diseases of the thyroid, and tumors of the spinal cord, which appeared in the earlier edition, have now been revised by new contributors.

CORNELL CONFERENCES ON THERAPY [Reports] Volume one. Edited by Harry Gold David P Barr Eugene F DuBois, McKeen Cattell, and Charles H. Wheeler New York The Macmillan Company 1946 322 p 21 cm. $3.50 835

Contents The doctor's bag. Use and abuse of bed rest. Hypnotics and sedatives. Psychologic aspects of the treatment of pain. Surgical measures for the relief of pain. Treatment of heart failure. Digitalis vs. digitoxin. The use of the mercurial diuretics. Treatment of subacute bacterial endocarditis. Management of abdominal distention. Treatment of some intestinal infestations. Treatment of some common diseases of the eye. Treatment of poisoning. The RH factor in therapy

—— Cornell Conferences on Therapy [Reports] Volume two Edited by Harry Gold David P Barr Eugene F DuBois, Mc Keen Cattell, Paul A. Bunn, and Walter Modell. New York The Macmillan Company 1947 354 p. 21 cm. $3 75 836

Contents The use of placebos in therapy Treatment of poliomyelitis. Treatment of meningitis. Treatment of syphilis. Treatment of rheumatic fever. Oral penicillin. Choice of sympathomimetic amines. The management of gallbladder disease. Principles of treatment of edema and dehydration. Treatment of edema by drugs. Uses and abuses of quinidine. Treatment of coronary artery disease. Treatment of some tropical diseases. Surgical treatment of hypertension. Evaluation of local antiseptics.

—— Cornell Conferences on Therapy [Reports] Volume three. Edited by Harry Gold, David P Barr Eugene F DuBois, Mc Keen Cattell, Walter Modell, and Ralph R. Tompsett. New York The Macmillan Company 1948 337 p 21 cm. $3.50 837

Contents The dose of drug An optimal routine for the management of congestive failure Uses of streptomycin. Uses of protein hydrolysates. Management of peptic ulcer with protein hydrolysates. Treatment of pneumonia. Treatment of barbiturate poisoning. Therapeutic uses of BAL. Treatment of hepatic insufficiency Management of pain due to muscle spasm. Treatment of thrombophlebitis. Treatment of alcoholism. The rational use of cathartic agents. Treatment of infections of the genitourinary tract.

Note: These volumes contain edited stenographic reports of series of discussions held under the auspices of the Departments of Medicine and Pharmacology of Cornell University Medical College—New York Hospital. Inaugurated in 1937 the original purpose of the conferences was to assist the third- and fourth-year students at the college in the correlation of pharmacology and general medical practice. The discussions soon proved to have wide appeal in the profession and reports of them have been published regularly in medical journals. Participants in the conferences include staff members of the college and hospital, pharmacists, visiting practitioners, and specialists. As collected here they form books of considerable interest to general practitioners.

HYMAN HAROLD THOMAS

An integrated practice of medicine a complete general practice of medicine from differential diagnosis by presenting symptoms to specific management of the patient. 1184 illustrations, 305 in color 319 differential diagnostic tables. Philadelphia W B Saunders Company 1946 4 v and index. illus. (part col'd) 24 cm. $60 00 838

Contents. Volume I, Bodily injuries and bodily responses to injury General reactions of bodily tissues. Infection. Allergy Neoplasms. Metabolism. Poisoning. *Disturbances of systems of communication and coordination* The circulatory system. Volume II, The blood and blood forming organs, including the spleen. The organs of internal secretion. The nervous system, including psychiatry The eye. Disturbances of end organ systems: The digestive system. Volume III, The respiratory system. The urinary system. The male reproductive system. The female reproductive system. Obstetrics. Pediatrics. The skeletal and locomotor systems. Volume IV The tegumentary system. The technic of medical diagnosis and therapy The technic of physical diagnosis. Laboratory methods. Medical therapeutics, including pharmacotherapy Surgical therapeutics. Prognosis. Appendix. Index volume: Index of differential diagnosis and general index.

Note An encyclopedic work covering the whole field of medicine and designed to serve as comprehensive reference tool for the general practitioner The aim is to present concise summary of accepted opinion and practice regarding the clinical manifestations, diagnosis, and treatment of the various diseases. Excellent integration of the various topics, an outstanding feature of this work, is obtained by the use of tabulations of symptoms and causes and by numerous cross references. These devices, and the provision of separate index volume in addition to the volume indexes, contribute to the ease with which information concerning the diagnosis and treatment of specific disease may be located. Bibliographies are not included.

MCCOMBS ROBERT PRATT

Internal medicine in general practice. Second edition illustrated. Philadelphia W B Saunders Company 1947 741 p illus. (part col d) 24 cm. $8.50 839

Contents: Fundamentals of diagnosis. Psychiatric disorders. Disorders of the heart. Hypertension and diseases of the kidney and urinary tract. Disorders of the gastrointestinal tract. Nutritional deficiencies. The anemias, blood dyscrasias and allied diseases. Infectious diseases. The use of the sulfonamides, penicillin and streptomycin. Chronic lung diseases. Rheumatic diseases. Endocrine disorders. Allergic diseases. Diseases of the nervous system. Vascular disturbances of the extremities. Index.

Note: (2030) This text for graduate students and reference book for the general practitioner aims to cover those problems of diagnosis and treatment which most generally confront the physician. It is intended to serve as handbook of accepted diagnostic and therapeutic principles and their application rather than an exhaustive treatise. This edition includes new chapters on psychiatric disorders and on the essentials of common vascular disorders. The discussion of chemotherapy has been rewritten to include material on the uses and abuses of penicillin and streptomycin and to compare their effectiveness with the sulfonamides. New therapeutic measures have also been included, such as lumbodorsal sympathectomy for hypertension, high protein diets and protein hydrolysates in malnutrition, folic acid in macrocytic anemias and sprue, and penicillin in syphilis and other infectious diseases. The chapter bibliographies have been brought up to date.

MAYO CLINIC ROCHESTER, MINNESOTA

Collected papers (1945) of the Mayo Clinic and the Mayo Foundation. Volume 37 Edited by Richard M Hewitt and others. Philadelphia W B Saunders Company 1946 899 p illus. 24 cm. $11.00 840

—— Collected papers (1946) of the Mayo Clinic and the Mayo Foundation. Volume 38 Edited by Richard M. Hewitt and others. Philadelphia W B Saunders Company 1947 915 p illus. 24 cm. $12.50 841

—— Collected papers (1947) of the Mayo Clinic and the Mayo Foundation. Volume 39 Edited by Richard M Hewitt and others. Philadelphia W B Saunders Company 1948 871 p. illus. 24 cm. $12.50 842

Contents (abridged). Alimentary tract. Genito-urinary diseases. Ductless glands. Blood and circulatory organs. Skin and syphilis. Head, trunk and extremities. Chest. Brain, spinal cord and nerves.

tension, by K. S. Grimson. Surgical inflammation of the lung, by J. W. ... Insecticides for prevention ... Elements. Physiologic and medical drugs, by A. R. Behnke. Endocarditis, by C. Bache and L. ... infections other than bacterial ... of the rhesus antigen in med ... anemia and other megaloblastic ... L. J. Davis. Nutritional requirements and R. Elman. Nutrition and I. Snapper. Author index. Subject ...

Note. (1045b) As in the first ... are summarized and ... The papers are not, however ... to convey the significance and ... original publications. The volume ... internists, and specialists ... with developments in this ...

AMERICAN MEDICAL ...

A.M.A. interns m... B Saunders Compa... $2.25

Contents: Internships and hospitals expect of interns ... from hospital and intern ... laboratory data. Drug ... Acute poisonings: diagnosis ... cal medicine. Lawful scope ... Association. Index.

Note. A concise handbook ... appointed hospital intern ... and is intended to supply ... book. The present work ... edition which appeared ...

BIERRING WALT...

Rypins medi... topical summari... Sixth edition ... chapter on psy... changes through... vances under th... L. Bierring with ... panel. Philadel... pany 1947 69...

Contents: The ph... cal sciences: Anatom... ogy. Pharmacology ... Obstetrics and gy... and goal of psych...

Note. Although ... in preparing for ... ties in the ... compilation of ... compact survey ... student to ... subject is presen... an extensive ... been prepared ... panel of ten ... of the work, 1933 ... Harold Rypins, M.D.

BLUMER, GEOF...

The therapeu... cago Wilcox & ... 25 cm. $75.00 p...

Contents (abridged): ... Nutrition and dietetics, ... R. S. Flora. The practi... therapy by H. F. W... therapy by H. F. Wolf ... by H. F. Wolf. Principles ... personal therapy by W. ... genes, by A. L. Barach. ...

... practice ... Fourth ... Philadelphia Lea ... cm. $10.00 843

... diseases, by ... The viral ... by W. W. ... The proto... by E. C. ... by F. E. Reverson. ... Fungous infections ... Diseases of ... vessels and lymph... Allen. Diseases ... of the alimentary ... tract, by J. A. ... H. Means. Diseases ... the spleen and the ... Diseases of the ... Part III, ... and chemical ... and G. A. Goldsmith. ... of metabolism, by ... to physical and toxic ... agents, by M. C. ... Diseases and ... by R. A. Kirschner ... Rivers and others.

... leading medical schools ... and reference manual ... follows the plan of the ... on those on the diseases, ... and contagious diseases, ... New material ...

... practice of medicine ... practitioners and stu... with written by Wil... Christian. Sixteenth ... Appleton-Century ... 1947 1530 p. 24 cm. 844

... of the nervous system. ... The introduction ... Diseases of the oral ... of the respiratory ... of the blood. Di... ... of the ... and ... of internal medicine. Di... ... of the nervous

... and practitioners and ... and ... The first ... for the past few ... the last time by the ... of the ...

remain unchanged, alterations and revisions have been made. The treatment of infectious diseases has been revised in accordance with recent advances in the fields of antibiotics, etiology and epidemiology and some changes have been made in such sections as those on malaria, typhus, scarlet fever and other streptococcic diseases, viral gastroenteritis, and cerebral localization. The list of chapter references has also been revised by the addition of recent papers taken mainly from American journals.

REHFUSS, MARTIN EMIL, AND OTHERS

A course in practical therapeutics by Martin Emil Rehfuss, F. Kenneth Albrecht and Alison Howe Price. Baltimore The Williams & Wilkins Company 1948 824 p. illus. (part col d) 29 cm $15.00 845

Contents (abridged): Section I, General therapeutic principles. Section II, Symptomatic therapy. Section III, Treatment of specific disorders. Section IV, Special treatment. Index.

Note. An exceptionally comprehensive and well organized work which has been developed out of material used in instructing medical students in the two-year course in practical therapeutics at the Jefferson Medical College, Philadelphia. The first section includes brief discussions of such basic problems and techniques as the diagnostic survey outlining the plan of treatment, prescription writing, diet planning, and the medicine and instruments which should be carried in the present-day general practitioner's bag. The second section describes symptoms associated with various disorders, their causes, and differential diagnosis, and their relief by therapeutic measures. The third section accounts for more than half of the book's length and it provides the symptoms, differential diagnosis, and treatment of a large number of diseases. The illustrations consist mainly of large reproductions of drawings which represent for the most part either points in diagnosis or therapeutic techniques.

YEAR BOOK OF GENERAL MEDICINE

The 1948 Year book of general medicine edited by Paul B. Beeson, J. Burns Amberson, George R. Minot, William B. Castle, Tinsley R. Harrison, [and] George B. Eusterman. Chicago The Year Book Publishers, Inc., 1948 821 p. illus. 19 cm. (The practical medicine year books) $4.50 846

Contents (abridged): Part I, Infectious diseases: Chemotherapy of infections. Meningococcemia. Bacillary dysentery (Shigellosis). Brucellosis. Tetanus. Influenza. Neurotropic virus diseases. Mumps. Rubella. Smallpox. Infectious hepatitis and homologous serum jaundice. Q fever. Rickettsialpox. Coccidioidomycosis. Toxoplasmosis. Amebiasis. Malaria. Part II, Diseases of the chest: Normal and abnormal physiology. Diagnostic and therapeutic procedures. Vascular and circulatory disturbances. Asthma. Neoplasms and cysts. The pneumonias. Tuberculosis. Mycoses and parasitic diseases. Bronchiectasis. Sarcoidosis. Part III, Diseases of the blood and blood-forming organs. Methods. Hemolytic anemias. Pernicious and other macrocytic anemias. Polycythemia. Leukemias and related conditions. Purpura. Coagulation defects. Diseases of the kidney. Part IV, Diseases of the heart and blood vessels: Congenital heart disease. Coronary disease. Cerebral vessels. Peripheral vessels. Normal and abnormal physiology. Arrhythmias. Antacoagulant therapy. Part V, Diseases of the digestive system and metabolism. Index. Index to authors.

Note. As in the other volumes in this useful series, the chapters in this one are made up of fairly long abstracts of significant articles published in medical periodicals throughout the world during the year preceding each issue. In each case, reference is given to the form of ... because of the original publication. Frequently an abstract is accompanied by brief criticism or supplementary note written by the editor. A generous number of illustrations is included, and the index is exceptionally full.

CLINICAL MEDICINE

ALBRECHT, FREDERICK KENNETH

Modern management in clinical medicine. Baltimore The Williams & Wilkins Company 1945 1,355 p. illus. (part col'd) ... cm. $12.00 ...

Contents The case history Nutrition and vitamin deficiency diseases. Disorders of the digestive tract. Diseases of the blood and blood-forming organs. Diseases of the heart. Peripheral vascular diseases. Diseases of the kidney The diagnosis and management of venereal diseases. Diseases of the respiratory system. Arthritis and allied conditions. Endocrinology for the general practitioner. Diseases of allergy Diseases of intoxication. Infectious diseases. Infectious diseases of post war importance. Nervous and mental diseases. Diagnosis and treatment of common skin disorders. Chemotherapy Geriatrics; the care of the aged. The care of the ambulatory patient. Clinical laboratory medicine. Appendix: Routine procedures; diets. Index.

Note An encyclopedic handbook designed for office use by general medical practitioners. In each of the chapters the information on both standard and recent techniques which is of practical value in general practice is given clearly and in adequate detail. In the chapters devoted to diseases, the following points are usually covered descriptions of the disease, case history form, diagnosis and differential diagnosis, interpretation of symptoms, complications, treatment, prevention and control. However this pattern is varied as necessary to fit the requirements of medical care of each disease. There are 237 figures and eleven colored plates Most of the chapters are supplemented by selected lists of recent literature.

AMERICAN PUBLIC HEALTH ASSOCIATION

Diagnostic procedures for virus and rickettsial diseases. New York American Public Health Association, 1948 347 p. illus 23 cm. $4.00 848

Contents Psittacosis, by K. F Meyer and B. Eddie. Lymphogranuloma venereum, by Geoffrey Rake. Trachoma, by Phillips Thygeson. Inclusion blennorrhea, by Phillips Thygeson. Variola and vaccinia, by Robert F Parker Influenza, by George K. Hirst. Primary atypical pneumonia, by A. E. Feller Mumps, by John F Enders and Jeanette H. Levens. Poliomyelitis, by John R. Paul. Encephalitis (arthropod-borne virus encephalitides and lymphocytic choriomeningitis) by William McD. Hammon. Rabies, by H. N Johnson and Thomas F Sellers. Herpes simplex, by T F McNair Scott. Yellow fever by John C. Bugher Dengue, by Albert B. Sabin. Phlebotomus (pappataci or sandfly) fever by Albert B. Sabin. Rickettsial diseases: Isolation and identification of rickettsial agents, by Norman H. Topping. Serologic procedures for the diagnosis of rickettsial diseases, by Joseph E. Smadel.

Note The papers in this volume grew out of panel discussion at the annual meeting of the American Public Health Association in October 1947 The volume is not an exhaustive review of current techniques nor is it intended to be handbook of clinical diagnosis or of theoretical virology Instead, it is designed as reference manual for the laboratory worker and student interested in learning the principal prevailing analytical methods. A typical chapter for example that one dealing with rabies, includes information on general features of rabies, special characteristics of the virus, methods of isolation and identification, and serologic and immunologic procedures. Selected references, mainly to the related periodical literature, are provided by most of the authors.

CANTAROW ABRAHAM AND MAX TRUMPER

Clinical biochemistry Third edition, revised. Philadelphia W B Saunders Company 1945 647 p illus. 24 cm. $8.00 849

Contents: Carbohydrate metabolism. Protein metabolism. Lipid metabolism. Calcium metabolism. Inorganic phosphorus metabolism. Phosphatase activity Magnesium metabolism Metabolism of iron. Sulfur metabolism. Iodine metabolism. Sodium, potassium and chloride metabolism. Water balance. Acid-base balance. The respiratory exchange and basal metabolism. Vitamins. Diabetes mellitus. Renal function. Nephrosis. Hepatic function. Chemical investigation of gastric function. Pancreatic function. Cerebrospinal fluid. Biochemical changes in pregnancy and lactation. Hormones assay and endocrine function, by A. E. Rakoff. Outline of chemical abnormalities in various disorders. Index.

Note: A survey of the biochemical knowledge which has significance in clinical medicine. The work is designed both for use as medical college textbook and as reference guide to the literature of the field. The authors are both outstanding authorities in biochemistry The book reflects not only their own investigations and experience but the published literature. Keyed references in the text lead the reader to the citations of the original articles. Throughout the book the material is presented from the viewpoint of the medical clinician rather than the specialist in biochemistry In preparing the present edition one new chapter was added and numerous revisions and amplifications were made in most of the older chapters. A new edition was scheduled for publication in 1949.

EVERETT MARK REUBEN

Medical biochemistry Second edition, completely revised. With 106 tables. New York Paul B Hoeber Inc. Medical Book Department of Harper & Brothers 1946 767 p illus. 24 cm. $7 00 850

Contents: Acid base relations. Colloids, enzymes, and oxidation. Digestion. Lipides. Carbohydrates. Proteins. Prosthetic radicals of nucleoproteins and chromoproteins. Inorganic substances. Vitamins and avitaminoses. Hormones and endocrines Addendum—guide to biochemical literature. General index. Index to tables and diagrams.

Note. (1942) An encyclopedic manual of biochemical knowledge, written for medical students and practitioners. In each chapter information is classified under the subheads chemistry metabolism, pathology; and there are additional subheads where the particular topic calls for them, as, for example, under proteins where the chemistry of immunity heredity and development is given proper consideration. In general, only accepted knowledge is included and controversial matters are ignored. There is much useful supplementary material, such as tables of logarithms, discussions of bacterial activities in digestion, and the importance of colloid chemistry in histology In the present edition the work is eighty-three pages longer than in the previous edition The changes consist largely in expansions of the discussion on certain topics, among which are anemia, the chemistry of development, hemoglobinuria, hypertension factors, metabolism of bile acids, plasma proteins, and renal function. Also there is material on newly added topics such as amino acid therapy, dicumarol, and the Rh factor Several of the numerous tables have been revised.

GRADWOHL, RUTHERFORD BIRCHARD HAYES

Clinical laboratory methods and diagnosis a textbook on laboratory procedures with their interpretation. Fourth edition St. Louis The C. V Mosby Company 1948 3 v illus. (part col'd) 26 cm. $40 00 851

Contents (abridged) Volume I, Urine analysis. Blood chemistry Hematology Gastric analysis. Examination of puncture fluids. Feces. Special tests. Volume II, Bacteriologic applications to clinical diagnosis. Serology Postmortem examinations. Tissue cutting and staining. Toxicologic technic. Detection of crime by laboratory methods. Electrocardiography Maximum supplies, equipment, and reagents for pathologic laboratories. Index (Volumes I-II) Volume III, Parasitology and tropical medicine, by R. B. H. Gradwohl and Pedro Kouri Parasitology and tropical medicine—general principles. Medical protozoology Human helminthology Diseases due to spirochetes, viruses, and bacteria. Diseases caused by Arthropods. Index (Volume III)

Note: A practical guide and reference manual, prepared for the use of clinicians, laboratory workers, and medical students. Standard laboratory procedures and their interpretation are described in detail from the point of view of diagnostic methods. In this edition some chapters such as those on bacteriology protein metabolism, complement, toxicology and police crime methods, optical crystallography, Rh factor and cancer diagnosis have been extensively revised and brought up to date by the original or new authors. Special attention has been given to the subjects of parasitology and tropical medicine, which are now treated exclusively in third volume.

KOCH FREDERICK CONRAD, AND MARTIN E HANKE

Practical methods in biochemistry Fifth edition. Baltimore The Williams & Wilkins Company 1948 419 p. illus. 23 cm. $3.00 852

Contents (abridged) Part I, The chemistry of cell constituents Carbohydrates. Lipids. Proteins and amino acids. Nucleoproteins and nucleic acids. Part II, The chemistry of the digestive tract: Salivary digestion. Gastric digestion. Intestinal digestion. Bile. Part III, Blood and urine: The quantitative analyses of blood. The quantitative analysis of urine. The chemical examination of urine for pathological conditions. Colorimetric and fluorometric methods for vitamins. Microbiological methods. Chemical tests for hormones. Appendix. Index.

Note ([illegible]) A laboratory manual designed for use in conjunction with courses offered to medical students. It presents the more

important qualitative and quantitative chemical aspects of cell constituents and of blood, secretions, and excretions. It contains considerable explanatory matter to help correlate theoretical and laboratory aspects of the subject. In this new edition the work is sixty-five pages longer than in the preceding edition. Among the changes are expansion of the material on manometric methods, additions of microbiological methods for vitamins and amino acids, and new or revised discussions of colorimetric and fluorometric methods.

LEVINSON, SAMUEL AZOR, AND ROBERT P MACFATE

Clinical laboratory diagnosis Third edition thoroughly revised. Illustrated with 192 engravings and 15 plates 7 in color Philadelphia Lea & Febiger 1946 971 p illus. (part col d) 24 cm. $10 00 853

Contents (abridged) The mouth. The stomach. The duodenum and related organs The intestine. Metabolism. Chemical analysis of the blood The kidneys. Chemical analysis of the urine. Hematology Immunology and serology Cerebrospinal fluid. The sputum. Skin tests and other biologic examinations. Laboratory methods in pediatric procedures. Tropical diseases. Milk and water analysis. Histologic technic. Legal medicine and toxicology Appendix. Index.

Note. A comprehensive review of the techniques and methods of laboratory diagnosis designed to meet the general needs of student, intern general practitioner and technician. Special chapters on laboratory procedures in such subjects as pediatrics and legal medicine are included and brief review of anatomy physiology and biochemistry precedes each section. The general plan and length of the new edition are approximately the same as the 1943 volume. However, chemical and laboratory methods have been brought up to date; new chapter on tropical medicine has been added, and such new topics as assay of penicillin in the blood, acid phosphatase, latent bone marrow findings, diodrast and inulin clearance tests are now included.

PETERS JOHN PUNNETT AND DONALD D VAN SLYKE

Quantitative clinical chemistry Volume I Interpretations Second edition Baltimore The Williams & Wilkins Company 1946 1041 p illus. 24 cm. $7 00 854

Contents Part I, Energy metabolism Energy metabolism. Part II, Carbohydrate Chemistry Physiology Clinical. Part III, Lipids Lipids. Steroid hormones. Fat-soluble vitamins. Part IV Protein metabolism The net metabolism of protein. Amino acids. Urea. Ammonia. Creatine and creatinine. Purines and pyrimidines. Index

Note: A very comprehensive presentation of the current knowledge of the chemistry of physiological processes in both health and disease. The text consists chiefly of integrated, concise summaries of the findings reported in thousands of periodical articles. Full references are given to the original publications. Although the main viewpoint is clinical, the tremendous scope of the work makes it valuable reference book in general biochemistry as well. The first edition appeared in 1931, and was immediately recognized as work of major importance. In the present edition the work is being completely rewritten. The volume described here is the only one yet published of the second edition, but second volume of *Interpretations* and volume of *Methods* are in preparation.

STITT EDWARD RHODES AND OTHERS

Practical bacteriology hematology and parasitology by E R. Stitt, Paul W Clough Sara E. Branham and contributors. Tenth edition. Philadelphia The Blakiston Company 1948 991 p. illus. (part col d) 24 cm. $10 00 855

Contents (abridged) Part I, Bacteriology Study and identification of bacteria. Spirochetes Rickettsia and Bartonella. Filtrable viruses. Medical mycology Immunity and hypersensitiveness Staining methods and special procedures. Part II, Hematology Technic of clinical blood examinations. Normal and pathologic blood cells. Diseases of the blood. Part III, Parasitology: The blood Protozoa. The intestinal Protozoa. Medical helminthology Keys to the helminths and laboratory technics. Medical entomology Scorpions, spiders, ticks, mites—class Arachnida. The insects. Poisonous snakes and lizards. Poisonous fish and coelenterates. Part IV Clinical and pathologic examinations of the various body fluids and organs. Appendices: Apparatus. Preparation of tissues for examination in microscopic sections. Equivalent-normal solutions. Colorimetric determinations. Anatomic and physiologic normals. Important diseases and injuries due to toxic plants. Laboratory procedures useful in diagnosis, indexed by diseases. Index.

Note (2043) A practical text for students, laboratory technicians, and practitioners, giving details of laboratory procedures. The volume covers the methods of study and identification of parasites, bacteria, insects, etc. the diagnosis of diseases with which these are associated, and the preparation of material for microscopic study. Emphasis is placed on the interpretation of laboratory data in clinical diagnosis. The extensive revision of this edition includes rewriting of the sections on bacteriology parasitology and vitamins, and the revision of material on pernicious anemia, hemolytic anemia, Rh factor, examination of the cerebrospinal fluid, medical mycology filtrable viruses, etc. No references are given.

DIAGNOSIS

BEHRMAN, HOWARD TAFT

Dermatologic clues to internal disease. New York Grune & Stratton, 1947 165 p illus. 23 cm. $5 00 856

Note: In this reference manual the skin manifestations of considerable range of diseases are described concisely and are illustrated in numerous photographs. The arrangement is alphabetical by name of disease. The volume is intended as an aid in diagnosis.

CLENDENING, LOGAN, AND EDWARD H. HASHINGER

Methods of diagnosis. With 143 illustrations. St. Louis The C V Mosby Company 1947 868 p illus. 25 cm. $12.50 857

Contents (abridged) Part 1 Principia diagnostica. Part 2, The patient: The history The physical examination. Part 3 Anatomic regions: The body as whole. The head. Chest, abdomen and back—external features. Diseases of the cardiovascular system. Examination of the chest. Examination of the abdomen. The extremities. Female genitalia. Male genitalia. The rectum. The nervous system. Part 4, Laboratory and special procedures: Examination of the urine. Examination of the blood. The sputum. Examination of the stool. The cerebrospinal fluid Immunologic tests—blood and skin. X-ray diagnosis. The electrocardiogram. Basal metabolism. Ophthalmoscopy otoscopy and laryngoscopy Bronchoscopy and esophagoscopy Proctosigmoidoscopy Gastroscopy and peritoneoscopy Index.

Note The first chapter in this book deals at length with logic and diagnosis and provides clue to the authors' main theme that sound reasoning, based on the symptoms and data pertaining to case of illness, is the most important element in diagnosis. This introductory chapter merits reading even by physicians with long experience in diagnosis. The remainder of the book deals fully with diagnostic techniques in general, and with the symptoms and other manifestations of diseases of the various parts and systems of the body The book is based on more than twenty-five years of teaching of physical diagnosis. It is intended for medical students and practicing physicians.

MACBRYDE, CYRIL MITCHELL, editor

Signs and symptoms their clinical interpretation. With 74 illustrations in black and white and 12 subjects in color on 6 plates. Philadelphia J B Lippincott Company 1947 439 p. illus. (part col d) 26 cm. $12.00 858

Contents: Introduction, by C. M. MacBryde. Pain, by C. M. MacBryde. Headache, by H. G. Wolff. Sore tongue and sore mouth, by R. W Vilter Thoracic pain, by J R. Smith. Abdominal pain, by S. M. Jordan. Backache and back pain, by R. H. Freyberg. Joint pain, by R. H. Freyberg Pain in the extremities, by R. D. Williams. Fever by P R. Bowen. Disturbances of consciousness and of muscle movement, by W G. Lennox. Fainting, by E. A. Stead, Jr. Dyspnea, by D P Barr. Cyanosis, by D P Barr.

Dehydration, by C. M. MacBryde. Edema, by W Barry Wood, Jr., and R. Sylvester Palpitation and tachycardia, by E. Mannheimer. Cough, by D. M. Stilling, J Hemoptysis, by D. M. Stilling, J Obesity by C. M. MacBryde. Weight loss and undernutrition, by C. M. MacBryde. Anorexia, nausea and vomiting, by J. L. Horner Constipation and diarrhea, by J. L. Horner Hematemesis and melena, by L. Schiff. Jaundice by S. A. Portis. Itching (pruritus) by S. Rothman and A. L. Shapiro. Nervousness and fatigue, by E. F Gildea. Index.

Note As indicated by the table of contents, this work is composed of series of original monographs on the interpretation of various classes, or types, of pains and other symptoms and signs. The material is concisely presented with practically no discussion of the related literature, but selected lists of references to the pertinent literature are given at the close of each chapter. The treatment throughout is from the viewpoint of general practitioners and clinicians who are concerned with practical problems in diagnosis. Each chapter begins with brief outline, and there is very full general index.

MAJOR, RALPH HERMON

Physical diagnosis. Third edition revised with 458 illustrations. Philadelphia W B Saunders Company 1945 444 p illus. 24 cm. $6 00 859

Contents. Introduction. Pain. General inspection. Examination of the head and neck. Inspection, palpation and percussion of the chest. Auscultation of the lungs. The physical findings in diseases of the lungs. Inspection, palpation and percussion of the heart. Auscultation of the heart. The pulse. Blood pressure. The physical findings in cardiovascular diseases. Abdomen and genitalia. The extremities. The examination of the nervous system. History taking and recording. Index

Note (2074) The purpose of this text is to provide students and practicing physicians with practical information regarding methods of examination, history-taking, and the interpretation of signs and symbols. Normal and abnormal are contrasted, and emphasis is placed on the need for careful observation of physical signs and an understanding of the underlying physical causes if correct diagnosis is to be reached. Only minor changes have been made in this new edition.

MEAKINS JONATHAN CAMPBELL

Symptoms in diagnosis Second edition. Illustrated. Baltimore The Williams & Wilkins Company 1948 542 p. 24 cm. $7.50 860

Contents. Skin. Skeletal system. Gastro-intestinal system. Respiratory system. Circulatory system. Genito-urinary system. Ocular symptoms and signs. Ear nose and throat. Nervous system. Symptoms in psychiatry Index.

Note: (2075) An exceptionally comprehensive presentation of pain and other patients' symptoms in diagnosis. The author has learned in long medical experience that such symptoms are of considerable importance, particularly in the preliminary steps in diagnosis; and he has presented this extensive accumulation of facts about them to aid general practitioners and clinicians in interpreting and coordinating the patients' symptoms with the findings of laboratory tests and other modern methods of diagnosis. In preparing the second edition the entire text was extensively revised; and it now includes several chapters written by other specialists on the interpretation of special types of symptoms, such as the chapter on symptoms in psychiatry written by Dr. Karl Stern.

TASSMAN ISAAC SAMUEL

The eye manifestations of internal diseases. Second edition. With 243 illustrations including 24 in color St. Louis The C V Mosby Company 1946 614 p. illus (part col d) 25 cm. $10.00 861

Contents (abridged) The general causes of eye manifestations. Structural abnormalities and manifestations. Congenital and hereditary eye manifestations. Infections and infectious diseases. Tuberculosis. Virus infections. Fungus infections. Ocular parasites and parasitic infections Focal infections Drug and chemical intoxications. Diseases of the cardiovascular system. Diseases of the blood Disorders of menstruation and pregnancy Diseases of the endocrine glands and metabolism. Avitaminoses and diseases of nutrition. Diseases of the nervous system. Intracranial tumors. Diseases of the skin. Diseases of bones of the skull. Index.

Note: In this treatise the eye manifestations and related manifestations of internal diseases are presented in way designed to facilitate diagnosis of the very large number of conditions in which the eye may be involved. Preliminary sections on anatomy and examinations of patients are followed by descriptions of eye abnormalities which may be seen in examination of the patient. The greater part of the work is concerned with eye conditions in systemic disease. In the present edition the book is substantially the same as in the 1942 version but it is 74 pages longer, and includes numerous changes and amplifications which were necessary to bring the material up to date. There is newly added material on ocular allergy epidemic keratoconjunctivitis, lymphogranuloma venereum, and Bowen's disease of the cornea. More recent methods of treatment have been added in some sections, but treatment is still subordinated to diagnostic considerations.

TODD, JAMES CAMPBELL, AND ARTHUR HAWLEY SANFORD

Clinical diagnosis by laboratory methods a working manual of clinical pathology with the collaboration of George Giles Stilwell. Eleventh edition Philadelphia W B Saunders Company 1948 954 p illus (part col d) 24 cm. $7.50 862

Contents. The microscope. The sputum. The urine. The blood. Clinical chemistry Gastric and duodenal contents. The feces Animal parasites. Pus, puncture fluids and animal inoculations. The nose, mouth, pharynx, ear and eye. Viruses and rickettsiae. Bacteriologic methods. Milk and water Introduction to serodiagnostic methods. Serologic tests for syphilis. Serologic tests for diseases other than syphilis. Medical mycology Vaccines. Antibiotics. Biologic skin tests. Serums and hormones. Appendix. Index-outline of laboratory findings in important diseases. Index.

Note (2064) A manual designed for the student, physician, and laboratory worker in many fields. The volume provides comprehensive outline of laboratory tests and techniques used in diagnosing disease, and methods of interpreting the findings An Index-outline lists the diseases alphabetically giving their outstanding laboratory characteristics and citing the pages on which instructions for making the tests may be found. The contents of this edition have been rearranged and new chapters added. The chapter on serodiagnostic methods has been divided into three short chapters, and the material on medical mycology expanded to chapter length. New plates have been added in the chapters on blood and gastric analysis. Some of the chapter bibliographies have been brought up to date with new references.

WHITE, BENJAMIN VROOM, AND CHARLES F GESCHICKTER

Diagnosis in daily practice an office routine based on the incidence of various diseases. 360 illustrations Philadelphia J B Lippincott Company 1947 693 p illus. (part col d) 26 cm. $15.00 863

Contents (abridged) Part One, The diagnostic survey Part Two, Diagnostic abnormalities—symptoms. Etiologic history Psychogenic factors in disease Symptoms referable to the head. Cardiorespiratory symptoms. Gastro-intestinal symptoms. Genito-urinary symptoms. Lameness or backache. Supplementary history Part Three, Diagnostic abnormalities of disease—physical findings. Inspection of body surface. Inspection of special regions. Examination of cardiorespiratory system. Palpation. The neurologic examination. Psychiatric examination. Part Four Laboratory procedures Routine laboratory examinations. Supplementary office laboratory procedures. Referred diagnostic procedures. Part Five, Major diseases: Office arrangement and equipment. Index.

Note: By drawing attention to the importance in diagnosis of the 200 more common diseases, and by outlining system of diagnostic procedure which is based upon the incidence of diseases, the authors of this work have made substantial contribution to the field. A tabulation of rare diseases which have been overemphasized in medical literature and teaching and companion table of diseases which it is imperative to diagnose point up their basic viewpoint. About four sevenths of the space is devoted to the general diagnostic approach and to considerations of symptoms by categories; about three-sevenths is given over to major diseases arranged by groups. The work is well illustrated and there is fair number of references to related literature. It is suitable for advanced students and internes, but its main use will be as guide and reference book for general medical practitioners.

PATHOLOGY

ANDERSON, WILLIAM ARNOLD DOUGLAS editor

Pathology With 1183 illustrations and 10 color plates. St. Louis The C. V Mosby Company 1948 1453 p. illus. (part col d) 25 cm. $15 00 864

Contents (abridged) Cells and their behavior by E. V Cowdry Inflammation, by M. McCutcheon. Degenerative changes and disturbances of metabolism, by W A. D Anderson. Disturbances of circulation, by V H Moon. Chemical injury by W W Jetter. Effects of radiation, by C. E. Dunlap. Bacterial diseases, by H. C. Hopps. Tuberculosis, by F D. Gunn. Spirochetal and venereal diseases, by E. R. Pund. Rickettsial and viral diseases, by H. Pinkerton. Fungus infections, by R. D Baker. Vitamins and deficiency diseases, by H Pinkerton. The heart, by E. M. Hall. The kidneys, by W A. D Anderson. The lung, by F D Gunn. The gastrointestinal tract, by J R. Schenken and E. L. Burns. Diabetes mellitus, by S. Warren. The blood and bone marrow by M. N Richter The adrenals, by W A. D Anderson. The skin, by A. C. Allen. The nervous system, by J Minckler Heredity and constitution in disease, by M. T Macklin. Index.

Note An encyclopedic presentation of the current knowledge of pathology It is suitable for students as textbook in postgraduate medical courses and as an office reference book. By liberal use of small type much more material has been included than even the large number of pages would indicate. Altogether there are 44 chapters, each one of which is written by one or more outstanding specialists The chapters include adequate bibliographies. The illustrations are well selected and reproduced.

BELL ELEXIOUS THOMPSON

A text-book of pathology Contributors B J Clawson and J S McCartney Sixth edition, enlarged and thoroughly revised, with 500 illustrations and 4 color plates. Philadelphia Lea & Febiger 1947 910 p illus. (part col d) 24 cm. $10 00 865

Contents (abridged) Injuries due to physical agents. Injuries due to chemical agents Vitamin deficiencies. Circulatory disturbances. Retrogressive tissue changes Tuberculosis. The venereal diseases. The mycoses. Acute infectious diseases. Tumors. Diseases of the blood. Diseases of the thymus and lymph nodes Diseases of the spleen. Diseases of the respiratory system Diseases of the digestive system. Diseases of the pancreas Diseases of the heart. Diseases of the blood-vessels. Diseases of the urinary system. Diseases of the reproductive organs of the male Gynecological pathology Diseases of the ductless glands. Neuropathology Diseases of the bones and joints. Index.

Note. (1062) A text for the medical student during clinical training, and reference book for the practicing physician. The new edition is basically the same as the 1944 volume, with careful revision and rewriting in such sections as are affected by recent advances in knowledge. This is especially notable in the sections on vitamin deficiencies and on tropical diseases. References are cited at the end of major sections, but only few are later than 1944.

LILLIE, RALPH DOUGALL

Histopathologic technic. Philadelphia The Blakiston Company 1948 300 p illus. 24 cm. $4 75 866

Content Microscopy Equipment. Fixation Decalcification. Sections. Stains and staining. General staining and mounting procedures. General oversight methods. Nuclear stains. Cytoplasmic granules Enzymes. Endogenous pigments Exogenous pigments and minerals Various cell products. Fats and lipoids. Connective tissue fibers. Fibrin, bacteria, protozoa, and other parasites. Glia and nerve cells and fibers. Hard tissues. Various special procedures. Buffers and buffer tables. Index.

Note. A practical manual prepared for the guidance of medical students, pathologists, and laboratory technicians. Workable methods for fixing, staining, mounting, and general preparation of wide variety of biological materials are described in detail Tabulations and step-by-step outlines of procedures supplement the descriptive material. References are cited with the laboratory methods but formal bibliography is not included.

PARKER, FRANCIS POWER, editor

A textbook of clinical pathology Third edition. Baltimore The Williams & Wilkins Company 1948 1023 p illus. (part col d) 23 cm. $9 00 867

Contents (abridged) General examination of blood cells and bone marrow—sedimentation rate, by L. W Diggs. Reticulocytes—erythrocyte fragility—hemoglobin—hematologic indices, by V P Sydenstricker. Disorders f the leucocytes, by R. R. Kracke. Blood groups, by I. Davidsohn. Blood parasites, by H. E. Maloney Clinical blood chemistry by F P Parker The assay of vitamins, by K. von Haam. The assay of hormones, by E. von Haam. Tests of liver function, by F P Parker Examination of sputum, by R. McBurney Examination of gastric contents—duodenal contents, by F P Parker Examination of urine—seminal field, by F P Parker Examination of feces, by H. E. Maloney Cerebrospinal fluid, by L. W Diggs. Immunologic tests, by R. McBurney The diagnosis of venereal lesions, by E. von Haam. Serologic tests for syphilis, by I. Davidsohn Appendix. Index.

Note. (1060) An inclusive exposition of laboratory techniques and the interpretation of laboratory findings. It is an established textbook in medical colleges, and also finds some use as reference book. The twenty-one articles which make up the book are the work of eight pathologists and professors from various medical schools. The two earlier editions were edited by Dr. Roy R. Kracke and the present editor but new administrative duties have prevented the former from carrying on the work except as contributor In this edition the work has been extensively rewritten to incorporate the advances in research and technical methods since the previous edition in 1940. The number of illustrations has been increased, and new references have been added to the chapter bibliographies. The Appendix offers miscellany of information on the use and care of the microscope, culture media, staining methods, assay of penicillin, and bacteriologic procedures in diagnosing rabies. There is list of over twenty references to supplement this section.

SMITH LAWRENCE WELD, AND EDWIN S GAULT

Essentials of pathology Third edition. With a foreword by the late James Ewing Philadelphia The Blakiston Company 1948 764 p. illus. (part col'd) 28 cm. $12 00 868

Contents General pathology: Retrograde processes. Disturbances of circulation. Somatic death—necrobiosis—necrosis—calcification. The evisceration Inflammation Specific bacterial infections. Diseases caused by animal parasites. Oncology Systemic pathology Diseases of the circulatory system. Diseases of the respiratory system. Diseases of the gastro-intestinal tract. Diseases of the liver and the pancreas. Diseases of the hematopoietic and reticulo-endothelial systems. Diseases of the urinary tract. Diseases of the male genitalia Diseases of the female genitalia. Diseases of the ductless glands. Diseases of the nervous system Diseases of the organs of locomotion Diseases of the teeth and related structures. Bibliography Index.

Note In this text for medical students the authors have sought to make the treatment of practical value by emphasizing fundamentals rather than attempting an encyclopedic presentation; by frequent citations of case histories; by avoiding controversial subjects and theories and by the extensive use of roentgenograms and gross pathological pictures The page size of this edition has been reduced and most of the chapters have undergone some form of revision. Case histories have been condensed and set in fine print, and subject specialists have assisted in the revision of such chapters as those on endocrine gland pathology the hematopoietic system, and pathological chemistry A new chapter on pathology of teeth and related structures has also been added. Bibliographies, arranged according to chapter are again included at the end of the volume.

WEINMANN JOSEPH P AND HARRY SICHER

Bone and bones, fundamentals of bone biology With 289 illustrations. St. Louis The C V Mosby Company 1947 464 p illus. 26 cm $10 00 869

Contents Part I, Normal structure and growth of bone and bones: Bone tissue Bones. Part II, Pathology of bone and bones: Developmental disturbances of the skeleton. Adaptational deformation of the skeleton. The influence of endocrine glands on bone and bones. The influence of vitamins on bone and bones. The effect of minerals on bone and bones. Healing of bones. Necrosis of bone and inflamma-

tion of bones. Tumors of the skeleton. Paget's disease, osteitic hyperplastica. References. Index.

Note: Written with the intention to bridge the existing gap between osteopathology and biology, this book has a dual purpose: to stimulate further research by the frequent use of working hypotheses and to serve as a practical guide for orthopedists, dentists, radiologists, and other specialists and teachers whose work requires an overall knowledge of the bones. The 415 pages of text, containing the description of the normal structure and growth and pathology of the bone tissue and organs, are illustrated with 289 pictures, mainly microphotographs. There are 30 pages of bibliography in which the references are arranged in alphabetical order for each chapter. The illustrations include numerous photographs of both gross and microscopic bone structure.

YEAR BOOK OF PATHOLOGY AND CLINICAL PATHOLOGY

The 1948 Year book of pathology and clinical pathology Pathology edited by Howard T Karsner assistant editor Herbert Z. Lund. Clinical pathology edited by Arthur Hawley Sanford. Chicago The Year Book Publishers, Inc., 1949 538 p illus 19 cm. (The practical medicine year books) $4.50 870

Contents (abridged) Pathology: General pathology Pathogenesis of shock, by S. Kalatsky Pathology of tumors. Evaluation of exfoliative cytology from viewpoint of pathologist, by N C. Foot. Cardiovascular system. Interrelation of Vitamin B₁₂, "animal protein factor" "extrinsic factor" and pteroylglutamic acid in macrocytic anemia, by R. W Heinle. Pulmonary berylliosis, by J R. Dutra. Iron metabolism—regulation of iron absorption, by T D. Kinney D. M. Hegsted, and C. A. Finch. Urinary system and male genitalia. Female genitalia and breast. Glands of internal secretion. Organs of locomotion. Skin. Nervous system. Clinical pathology: Hematology Clinical chemistry Urinalysis. Serology Bacteriology Mycology Parasitology Cytology Apparatus. Index. Index to authors.

Note. As in the related books issued by this publisher, this manual is designed to provide a digest and key to the significant literature in its field which was published during the preceding year. A selection of the world's literature so far as it is available is made by the editors, then the articles are abstracted and are expanded into readable summaries under main topics and subtopics. The abstracts themselves are fairly long, and a footnote reference is made in each instance to the original publication. In addition, some abstracts are supplemented by notes written by the editor in which reference is frequently made to the work of still other authorities. The four signed articles, as noted in the contents, are special features of this issue. They provide summaries of the state of knowledge and the current techniques in the special fields mentioned in their titles, and are based on a wide range of the pertinent literature rather than on articles published during one year.

PHARMACOLOGY AND TOXICOLOGY

AMERICAN PHARMACEUTICAL ASSOCIATION

The National Formulary Eighth edition. Official from April 1 1947 Washington D C The American Pharmaceutical Association, 1946 850 p illus. 24 cm. $7 50 871

Contents (abridged) Committee on National Formulary History of the National Formulary Articles added to the National Formulary VIII. Articles official in N F VII but not admitted to N.F VIII. General principles of revision. Monographs on drugs, chemicals and preparations. Reagents and preparations for use in the clinical laboratory Ingredients of reagents and preparations for use in the clinical laboratory General tests Reagents, test solutions, colorimetric solutions, indicators, volumetric apparatus, volumetric solutions, hydrogen ions and pH. Index.

Note. (30984) This latest edition of the *National Formulary* like the preceding editions, is designed to supply definite formulas for preparations that are sufficiently used in the medical practice within the United States or its possessions, and for which formulas are not included in the *Pharmacopoeia of the United States*, and to provide standards and tests for the identity quality and purity of the ingredients used in these formulas and in other drugs so that uniformity in the physical properties and therapeutic action of these preparations will be assured. The standards are recognized as official by the terms of the Federal Food, Drug and Cosmetic Act. The present edition, which became official on April 1, 1947 embodies numerous changes. The monographs are now titled first in English and second in Latin; and the section on tests, processes, and apparatus has been greatly enlarged. The number of new monographs on drugs, chemicals, and preparations added in this edition is 184 and 176 monographs which were official in the preceding editions were not admitted to this one. A new edition is scheduled for publication in 1950.

ANDERSON HAMILTON HOLLAND, AND OTHERS

Pharmacology and experimental therapeutics, a survey for 1941–1946 by Hamilton H. Anderson, Fumiko Murayama and Benedict E. Abreu. Berkeley and Los Angeles University of California Press 1947 369 p 24 cm. $6.50 872

Note: This reference manual has two important purposes: (1) to serve as a condensed pharmacopeia of new drugs developed during the period 1941–1946, and of old drugs for which new uses have been discovered; (2) to provide a selective bibliography of the literature of the subject published during this same period. The arrangement is alphabetical by name of drug. For each drug, concise quantitative data are given regarding the beneficial or harmful effects produced on animals and man dosages, and a reference to the original source of information.

BASTEDO WALTER ARTHUR

Pharmacology therapeutics and prescription writing, for students and practitioners. Fifth edition Philadelphia W B Saunders Company 1947 840 p illus. 24 cm. $8.50 873

Contents (abridged) Part I, The constituents of organic drugs. Active principles and tissue processes. The Pharmacopoeia and the National Formulary and other safeguards of the sick. Dosage. Administration. Sites and modes of action of drugs. Part II, Individual remedies: Protectives. Nutrients. Vitamins. Counterirritants War gases. The digestive ferments. Acids and bases. Alkalies—antacids. Phosphorus. Parathyroid. Adsorbents. Astringents. Anthelmintics. Cathartics Remedies whose chief action is upon the circulation. Remedies whose chief action is upon the central nervous system. Antipyretics. Drugs which chiefly affect the peripheral nervous system. Antiseptics—anti-infectives. The heavy metals Emetics. Antiemetics. Iodine (Iodism) Thyroid. Remedies that affect the uterus. The hormones—the endocrine glands Part III, Prescription writing. Index.

Note: In this text and reference manual emphasis is placed on the clinical use and effect of drugs as they are employed by the practicing physician. Each drug or group of drugs is described as to its composition, dosage, pharmacologic action, use in prescriptions, cautions and contraindications, symptoms and treatment of poisoning Prescription writing is discussed at some length. This edition has been extensively revised to keep pace with advances in the chemical and biological fields. New remedies now discussed include amino acids, blood fractions, coagulants and anticoagulants, heparin, dicumarol, curare, antihistaminics, convulsants and anticonvulsants, folic acid, etc. Modern treatment of shock, anemia, malaria, syphilis, etc. are also given.

BERNHEIM FREDERICK

The interaction *of drugs and cell catalysts.* Minneapolis Minn. Burgess Publishing Co., 1946 107 p illus. 27 cm. Paper $2.25 874

Contents (abridged) Part I, Drugs which affect the activity of certain enzymes—Choline esterase Isolation and specificity Correlations between physiological function and esterase activity Acetylcholine content of tissues. Choline esterase in cornea and denervated muscle. Effect of morphine and strychnine on the nervous system. Effect of curare on the nervous system Effect of eserine and prostigmine on the gastro-intestinal system. The anti-esterase effects I—atropine—cocaine—quinine—bile salts—caffeine. Essential elements. Manganese and enzyme activity Zinc and enzyme activity Copper and enzyme activity Potassium and calcium. Toxic metals. Cyanide. Fluoride Sulfanilamide. Part II, Drugs which are acted on by certain enzymes: Alcohol. Nicotine. Quinine. Azo dyes. Procaine. Histamine. Estrogens and related compounds.

Note (2101) A monographic review based on the literature. Its purpose is to answer two questions as stated by the author: (1) If a drug alters the activity of a specific enzyme in vitro, how far can the pharmacological effects of the drug be explained on this basis? and, (2) if an enzyme inactivates a drug in vitro can this explain its fate in the body?" The evidence that bears on these questions is summarized briefly and key-numbered references are made to the original publications. This edition has been revised and material has been added on a considerable number of drugs that were not considered in the first edition.

BRADLEY WILLIS T AND CARROLL B GUSTAFSON

Pharmaceutical calculations. Philadelphia Lea & Febiger 1945 283 p 21 cm. $2 75 875

Contents The metric system. The common systems. Conversion. Centigrade and fahrenheit thermometers. Reducing and enlarging recipes. Calculation of doses. Weights and volumes. Mixtures by ratio and percentage solutions. Dilution and concentration. Appendix. Index.

Note The mathematical calculations explained and illustrated in this volume are those which the practicing pharmacist must be able to perform with ease and facility. Nothing beyond the operations of simple arithmetic is involved and particular attention is given to ratio and proportion. Numerous worked examples, review problems, and all necessary tables of weights and measures are included.

BROOKES VINCENT J AND HUBERT N ALYEA

Poisons their properties, chemical identification, symptoms and emergency treatments. New York D Van Nostrand Company Inc. 1946 209 p illus. 22 cm. $4.00 876

Contents Poison investigation. Basic information for the investigator. Special properties of poisons. Emergency information for immediate reference. Industrial hazards. Poisoning from foods, plants, snakes and spiders. Special techniques. Appendix. Index.

Note. The first author of this work is a police officer and it is probable that the book originated in a desire to furnish a manual for police use. However only the first two chapters, which deal with poisons from the viewpoint of the police investigator are limited in application. The remainder of the book gives compact information of more general interest. The principal poisonous substances are arranged alphabetically and brief information is given on their chemical properties, physiological effects, fatal doses, identification, symptoms, and emergency treatment. In addition to compounds commonly thought of as poisons, hazardous industrial chemicals are treated too; and there is some information of food poisoning, snakebites and poisonous plants.

CUSHNY ARTHUR ROBERTSON

Pharmacology and therapeutics Thirteenth edition thoroughly revised by Arthur Grollman and Donald Slaughter Illustrated with 74 engravings. Philadelphia Lea & Febiger 1947 868 p illus. 24 cm. $8 50 877

Contents (abridged) Introduction Method of action of drugs Methods of administration. The chemical characters of drugs. Biological assay Part I, The action of inorganic substances. Part II, Substances which are characterized chiefly by their local action Skin and mucous membranes protectives. Volatile oil series. Drugs affecting taste. Digestive ferments. Vegetable astringents—tannic acid series. Purgatives. Part III, Substances characterized chiefly by their action after absorption Depressants of the central nervous system. Stimulants of the central nervous system. Local anesthetics. Curare group. Substances acting on the autonomic nervous system. Ergot and its alkaloids. The histamine group and anaphylaxis Drugs of internal secretion. Hematics. Vitamins, or accessory food substances. The digitalis series. Colchicum. Cinchophen and its derivatives. The antipyretics—acetanilide and antipyrine series. Salicylates. Quinine and other antimalarials. Sulfanilamide and its derivatives. Penicillin and other antibiotics. Part IV Anthelmintics. Part Antiseptics and disinfectants. Part VI, Vaccines, sera and miscellaneous biologicals. Classification of drugs according to their therapeutic uses. Index.

Note: A standard textbook and reference manual which has enjoyed wide use in both the United States of America and Great Britain since about 1900. This is the first edition in which the task of revision has been completely entrusted to U S. A. authorities. These revisers have endeavored to keep the organization and spirit of the earlier edition and to make only such changes as have been made necessary by recent advances in chemotherapy endocrinology the vitamins, etc. and by changes of emphasis in modern pharmacology The edition conforms to the twelfth edition of the *U S. Pharmacopoeia* and to the British *Pharmacopoeia* of 1932.

CUTTING WINDSOR COOPER

A manual of clinical therapeutics a guide for students and practitioners Second edition, illustrated Philadelphia W B Saunders Company 1948 712 p illus. 19 cm. $5.00 878

Content (abridged) General problems in therapy Bacterial infections. Spirochetal infections. Virus infections Rickettsial infections Mycotic infections. Protozoal infections. Metazoal infestations. Nutritional diseases. Endocrine diseases. Metabolic diseases. Diseases due to allergic states. Diseases due to physical agents. Diseases of the intestines and peritoneum. Diseases of the pancreas, liver and bile passages. Diseases of the heart. Diseases of the blood and spleen. Diseases of the respiratory system and mediastinum. Diseases of the genitourinary system Diseases of the muscles, bones and joints. Diseases of the skin. Diseases of the central nervous system. Diseases of the mind. Psychotherapy Symptoms and treatment of poisoning. Diet lists. Clinical physiological data. Index.

Note. (2106) Concise outlines of the specific treatment of the common clinical diseases and of tropical diseases are presented in this manual for students and practitioners. Clinical and pharmacological descriptions are included but emphasis is on treatment. The drugs mentioned come almost exclusively from the *United States Pharmacopoeia*, the *National Formulary* and *New and non-official remedies*. Drugs advised in the text are listed alphabetically in the appendix, giving source dose, and therapeutic use. The inclusion of improvements in therapy and the introduction of such new therapeutic agents as the newer antibiotics, antimalarials, antihistamines, antithyroid drugs, anticonvulsants, and folic acid account for nearly 100 extra pages in this edition. Exact doses for children are now included in the appendix.

DUGGAR, BENJAMIN MINGE, AND OTHERS

Aureomycin—a new antibiotic. Consulting editor J H. Williams. New York The New York Academy of Sciences 1948 168 p illus (part col d) 24 cm. (New York Academy of Sciences. Annals. Vol. 51 p. 175–342 1948) Paper $2 50 879

Contents. Aureomycin a product of the continuing search for new antibiotics, by B. M. Duggar The pharmacology of aureomycin, by R. K Hanzel and others. Bacteriological studies of aureomycin, by C. W Price and others. The determination of aureomycin in serum and other body fluids, by A. C. Dornbush and E. J Pelcak. In vitro studies with aureomycin, by C. A. Chandler and E. A. Bliss. Laboratory studies with aureomycin, by T F Paine, Jr and others. Clinical studies with aureomycin, by H. S. Collins and others. Studies on serum concentrations in humans and preliminary observations on the treatment of human infections with aureomycin, by H F Dowling and others. Use of aureomycin on some experimental infections in animals, by P A. Little. Treatment of experimental infections with aureomycin, by M. S. Bryer and others. The pharmacology and clinical trial of aureomycin; a preliminary report, by E. B Schoenbach and others. Aureomycin in ocular infections, by A E. Braley and M Sanders. Action of aureomycin against experimental rickettsial and viral infections, by S. C Wong and H. R. Cox. Aureomycin—a new antibiotic with antirickettsial properties: its effect on experimental spotted fever and epidemic typhus, by L. Anigstein and others. The treatment of lymphogranuloma venereum and granuloma inguinale in humans with aureomycin, by L. T Wright and others. Treatment of Q fever in man with aureomycin, by E. H. Lennette and others

Note Aureomycin, an antibiotic obtained from a mold belonging to the streptomyces group, was first isolated at the Lederle Laboratories of the American Cyanamid Company in November 1947. These papers, which were originally presented at a conference held in July 1948 under the auspices of the New York Academy of Sciences, describe and evaluate a series of experiments conducted by

the authors to determine the effectiveness of aureomycin in treating various rickettsial and viral diseases. The material is addressed to research workers in the fields of medicine, pharmacology and bacteriology

EGGLESTON CARY

Essentials of prescription writing. Eighth edition. Philadelphia W B Saunders Company 1947 155 p 17 cm. $2 00 880

Contents: Introduction. The modern prescription. Weights and measures. Latin grammar Grammatic construction of prescriptions. Practical writing of prescriptions. Doses of drugs. Vehicles. Incompatibility Modes of administration of medical agents. Suitable methods of prescribing official preparations. Practice prescriptions. Index.

Note: (2109) A handy manual for the practicing physician and medical student. It describes the correct method for writing prescriptions, and aims to present basic information in an easily accessible form. A short chapter entitled *The modern prescription* has been added to this edition, but actual changes in text are slight.

GATHERCOAL, EDMUND NORRIS, AND ELMER H. WIRTH

Pharmacognosy Second edition thoroughly revised with 372 illustrations and 3 colored plates. Philadelphia Lea & Febiger 1947 756 p. illus. (part col'd) 24 cm. $10.00 881

Contents: General considerations. Thallophyta. Bryophyta. Pteridophyta. Spermatophyta. Animal drugs. Powdered drugs. Key for identification of powders. Index.

Note: (2111) A textbook and reference manual on drugs originating in the plant or animal kingdoms. The drugs are listed according to the taxonomy of the plant or animal from which they are derived, and brief descriptions of origin, distribution, cultivation, preparation, structure, constituents, uses, and doses are given for each. This revision conforms to the arrangement and scope of the first edition, which in turn was based on Henry Kraemer's *Scientific and applied pharmacognosy* third edition, New York, 1928 but some material which is obsolete or which can be readily found in the *United States Pharmacopoeia* has been deleted. The attention given to the chemical aspects of the subject has been further emphasized by the enlarged discussion of the individual chemical groupings. Complete, official histories of each drug now replace the emphasis formerly given to the immediate, official status of the drug.

HERRELL WALLACE EDGAR

Penicillin and other antibiotic agents. Philadelphia W B *Saunders Company* 1945 363 p illus. (part col d) 24 cm. $5 00 882

Contents (*abridged*) Part I: The historical aspects of the development of penicillin. Methods of preparing penicillin. Physical and chemical properties of penicillin. Antibacterial activity of penicillin in vitro. Antibacterial activity of penicillin in vivo. Absorption, diffusion and excretion of penicillin. Methods of standardizing penicillin and of determining the concentration of penicillin in body fluids. Part II, Clinical use of penicillin Preparations and synergism of penicillin in clinical use. Methods of administration and dosage. Infections involving the blood stream and heart. Infections of the central nervous system, including the eye. Infections of the respiratory system. Infections of the genito-urinary system exclusive of gonorrhea Part III: Gonorrhea. Syphilis and other spirochetal infections. Consideration of the toxicity of penicillin and of its lack of toxicity for blood cells. Part IV, Other antibiotic agents: Tyrothricin (gramicidin and tyrocidine) Streptothricin. Streptomycin. Miscellaneous antibiotic agents. Antibiotic substances originating from sources other than microbes. Index

Note: Written principally for students and beginning research workers in chemotherapy this book is summary of the knowledge at the time of publication of the preparation, properties, and clinical uses of penicillin and of the more recently discovered antibiotics mentioned in the texts of the final part. Statements in the text are keyed to the extensive lists of references that accompany the chapters. The author is Assistant Professor of Medicine at the Mayo Foundation of the University of Minnesota.

KOLMER, JOHN ALBERT

Penicillin therapy including streptomycin, tyrothricin and other antibiotic therapy Second edition New York D Appleton-Century Company 1947 339 p illus. 25 cm. $6 00 883

Contents (*abridged*) Introduction. Chemotherapeutic compounds of biologic origin—antibiotics. Part One, History production, assaying and properties of penicillin. Production of penicillin. Methods for the detection and assaying of penicillin. Chemical and physical properties of penicillin. Antimicrobial activity of penicillin in vitro and in vivo. Pharmacology and toxicity of penicillin. Part Two, Clinical applications of penicillin therapy: Principles of penicillin therapy Administration and dosage of penicillin. Penicillin in the treatment of the septicemias. Penicillin in the treatment of bacterial endocarditis and pericarditis Penicillin in the treatment of the suppurative meningitides, brain abscess and wounds of the brain. Penicillin in the treatment of diseases of the eye. Penicillin in the treatment of diseases of the ear nose and throat. Penicillin in the treatment of diseases of the lungs and pleurae Penicillin in the treatment of gonorrhea and other diseases of the genito-urinary system. Penicillin in the treatment of syphilis and other spirochetal diseases. Penicillin in the treatment of diseases of the skin. Penicillin in the treatment of wounds, burns and other surgical diseases. Penicillin in the treatment of diseases of the bones and joints. Penicillin and tyrothricin therapy in relation to dentistry and oral surgery Antibiotic therapy in relation to veterinary medicine. Part Three, Properties and clinical applications of other antibiotic agents: Streptomycin Tyrothricin (gramicidin and tyrocidine) Streptothricin and other antibiotic compounds. Index.

Note: A monograph of considerable importance. It is based on comprehensive review of the literature published through about the year 1946. Reported techniques, results, and other information of clinical value are organized and summarized with exact references to the original publications. Except some introductory and background material in the first part, all of the work is devoted to the therapeutic aspects of the antibiotics. However the whole field of therapy is covered including not only knowledge pertinent to the practice of medicine, but also to surgery dentistry and veterinary medicine. The first edition was published in 1945. Although the present edition was published only two years later, it represents very extensive revision and enlargement of the original.

LONG, PERRIN HAMILTON

A B-C s of sulfonamide and antibiotic therapy Philadelphia W B Saunders Company 1948 231 p 19 cm. $3.50 884

Contents (*abridged*) Sulfonamides and antibiotics: Dosage of sulfonamides and antibiotics. Preparation of sulfonamide or antibiotic solutions for parenteral administration. The clinical pharmacology of sulfonamides and antibiotic agents. Drug resistance. Toxic manifestations in sulfonamide and antibiotic therapy Hints on the use of sulfonamides and antibiotics. Clinical applications of sulfonamide and antibiotic therapy: Abscess. Ulcers. Wounds. Index.

Note. A manual of concise, reliable information on the therapeutic uses and administration of penicillin, streptomycin, tyrothricin, and the sulfonamide drugs. It is designed for quick reference use by practicing physicians. The section on clinical applications occupies the greater part of the book. Here arranged in alphabetical order are the names of about 150 diseases under each one is given information on etiology specific therapy auxiliary therapy together with supplementary comment by the author. If the sulfonamides or antibiotics have no value in treating particular disease there is frank statement to this effect.

MCINTYRE, ARCHIBALD ROSS

Curare its history nature and clinical use. Chicago The University of Chicago Press, 1947 240 p illus. 24 cm. (The University of Chicago Committee on Publications in Biology and Medicine) $5 00 885

Contents: Curare and its meaning. Early history of curare. The first witnesses. Botany Chemistry Early experiments with curare. The actions of curare on nerve and muscle. Theories of curarization. Effects of curare on the circulation and respiration. Effects of curare on the viscera. Absorption, excretion, and toxicity of curare. Miscellaneous effects of curare. Curare and the central nervous system. The clinical use of curare. Conclusions and speculations. Addendum. Subject index Author index

Note. A comprehensive study of the South American arrow poisons. It is based on thorough examination of available literature, and on the author's own research. The book brings together great amount of information concerning the discovery and early uses of curare, its botanical origin, properties, and chemical composition, and finally review of recent physiological and pharmacological re-

search regarding the clinical uses of the drug. The references given at the end of each chapter constitute an extensive bibliography of the subject.

NORTHEY ELMORE HATHAWAY

The sulfonamides and allied compounds. New York Reinhold Publishing Corporation, 1948 660 p illus 23 cm. (American Chemical Society monograph series) $12.50 886

Contents: History of bacterial chemotherapy Nomenclature, classification and synthesis of sulfanilamide derivatives. Structure and activities of simple sulfanilamide derivatives. Structure and activities of complex sulfanilamide derivatives. Structure and activities of compounds related to sulfanilamide. Structure and activities of sulfones. Structure and activities of compounds related to the sulfones. Experimental evaluation of chemotherapeutic activity Relationship of structure to chemotherapeutic activity Pharmacology of sulfonamide and sulfone drugs. Theories of the mechanism of action of sulfonamide drugs. Clinical evaluation of sulfonamide drugs. List of journals searched. References Appendixes Index.

Note: Here is an exhaustive survey of the published knowledge on the chemical aspects of the sulfa drugs Although considerable portion of the work is devoted to clinical aspects, this phase of the subject is treated somewhat less thoroughly As is common in this series, the work is based on the literature, and statements in the text are key-numbered to the citations of the original sources in the bibliography The bibliography contains 1444 references. Patents are included. Despite the length of the work, the treatment is highly compressed, and many data are presented in tabular form.

OLDHAM, FRANCES KATHLEEN AND OTHERS

Essentials of pharmacology by Frances K. Oldham, F E. Kelsey and E. M K. Geiling. Philadelphia J B Lippincott Company 1947 440 p illus. 20 cm. $5 00 887

Contents (abridged) Section One General principles: Historical development of pharmacology Control and dispensing of drugs. Administration of drugs. Section Two, Functional drugs: General anesthesia Regional anesthesia. Hypnotics and sedatives. Antipyretic analgesics. Morphine and allied drugs. Central nervous system stimulants. Autonomic drugs. Histamine and antihistamine drugs. Heart drugs. Diuretics. Blood, blood derivatives and blood substitutes. Drugs affecting the blood and the blood forming organs. Drugs affecting the gastro-intestinal tract. Oxytocics. Endocrines Vitamins Diagnostic agents Section Three, Chemotherapeutic agents: Local anti-infectives. Intestinal anthelmintics. Amebacides. Antimalarial drugs. Sulfonamides. Antibiotics. Index.

Note: A very compact introduction intended for students of medicine, dentistry veterinary medicine, nursing, and pharmacy T aid the student in his assimilation and retention f the text matter drugs are grouped according to their actions and uses. A list of drug preparations and short bibliography accompany each chapter The authors are all associated with the Department of Pharmacology f the University of Chicago.

THE PHARMACOPOEIA OF THE UNITED STATES OF AMERICA

The Pharmacopoeia of the United States of America. Thirteenth revision (U.S.P XIII) By authority of the United States Pharmacopoeial Convention, meeting at Washington, D C. May 14 and 15 1940 Prepared by the Committee of Revision and published by the Board of Trustees Official from April 1 1947 Easton Pa. Mack Publishing Company 1947 957 p illus. 23 cm. U.S., $8.00 foreign countries $8.50 888

Contents (abridged) The history of the United States Pharmacopoeia. Abstract of the proceedings of the U S Pharmacopoeial Convention, 1940 Abstract of the proceedings of the adjourned meeting of the Pharmacopoeial Convention, 1942. Articles added to the U.S P XIII. Articles official in the U.S P XII but not admitted to the U.S P XIII. Changes in official English titles Changes in official Latin titles. U S pharmacopoeial titles in English and Spanish. Monographs on vegetable and animal drugs, chemicals, and preparations. General tests, processes and apparatus. Reagents, test solutions, colorimetric solutions, indicators, volumetric apparatus, volumetric solutions, hydrogen ions and pH. Tables. Index.

Note. (1131) This work constitutes the official description of medicinal drugs for the pharmacy profession in the United States of America. Readers interested in its full scope should read "General principles recommended by the U.S.P convention of 1940, to be followed in revising the Pharmacopoeia, on pages hard-back of the current issue. As in previous editions, the monographs on drugs, chemicals, and preparations account for most of the work's length. Fifty-six monographs, or articles, which appeared in U.S.P XII have been deleted and ninety-five new monographs have been added. English titles have been placed at the head of the monographs and the Latin titles have been placed in secondary position. Since the English titles now determine the alphabetical order certain simplifications in arrangement have become possible. As was U.S.P XII, this edition will be supplemented from time to time by "Interim supplements.

PIJOAN MICHEL, AND CLARK H. YEAGER

A handbook of commonly used drugs including certain measures for the control of diseases peculiar to the tropics of the western hemisphere. Springfield, Ill. Charles C Thomas 1947 198 p illus. 24 cm. $3 75 889

Contents: Drug analgesics, anesthetics, and hypnotics. Central nervous system stimulants. Autonomic drugs. Drugs blocking post ganglionic cholinergic effects. Drugs blocking adrenergic effects. Cardiovascular drugs. Drugs which increase or decrease urine flow Oxytocic drugs and miscellaneous gynecologic agents. Endocrines (non-gynecological) Common hematologic agents. Certain nutritional factors used pharmacologically Cathartics. Emetics and expectorants. Agents used to combat infectious diseases. Metallic compounds used in the treatment of syphilis. Commonly used antibiotics. Treatment of some of the common diseases peculiar to subtropical and tropical areas of the western hemisphere. Biological products. Appendix. Index.

Note. The chemical composition, physiological effects, uses, and dosages of the important drugs are summarized in this manual, which includes also considerable information on the causative agents, symptoms, and therapy f various diseases. Each chapter concludes ith short list of articles in which fuller information can be found The Appendix contains variety of useful information such as formulas for standard solutions, ointments, and liniments; glossary of Latin words and abbreviations; and pertinent weights and measures. The book is designed as reference book for use in the tropics or other regions here more comprehensive reference books are not available. It is useful also as an office book anywhere.

POWERS WENDELL HOLMES editor

Advancing fronts in chemistry A series of lectures sponsored by Wayne University under the direction of Neil E Gordon, Chairman, Department of Chemistry Volume II Chemotherapy New York Reinhold Publishing Corporation 1946 156 p illus. 24 cm. $3.25 890

Contents: Chemotherapy in experimental tuberculosis, by W H. Feldman. Synthetic antispasmodics, by F F Blicke. Chemistry of the sulfa drugs, by E. H Northey The antimalarial problem, by Harry S Mosher Organometallic compounds as chemotherapeutic agents, by C. Kenneth Banks Past developments and present trends in the chemotherapy of parasitic diseases, by W H. Wright. Index.

Note. Each of these scientific papers is designed to give short historical survey an interpretation of present knowledge and latest developments, and an indication of the principal unsolved problems in the specific branch of chemotherapy under discussion. The purpose of the lecture series was to highlight areas of research that are currently active rather than to cover the whole field of chemotherapy The treatment is for advanced students and other persons with scientific training. Portraits and biographical sketches of the authors are included, and extensive lists of references accompany each paper

ROGERS CHARLES HERBERT

A text-book of inorganic pharmaceutical chemistry by Charles H Rogers and collab-

orators, Taito O Soine and Charles O Wilson Fourth edition thoroughly revised, with 23 illustrations. Philadelphia Lea & Febiger 1948 704 p. illus. 24 cm. $10 00 891

Contents (*abridged*) Oxygen and ozone. Hydrogen. Nitrogen, nitrous acids and ammonia. The halogen family The alkali metals. The coinage metals: Copper Silver Gold. The alkaline earth metals. Beryllium and magnesium and their compounds Zinc and zinc compounds. Cadmium and cadmium compounds. Mercury and mercury compounds. Boron, aluminum and the metals of group III. The elements of group IV: Carbon. Silicon. Lead and lead compounds. The phosphorus family: Arsenic. Antimony Bismuth. Group VI Sulfur selenium and tellurium and their compounds. Chromium and chromium compounds. Molybdenum, tungsten and uranium and their compounds. Manganese and manganese compounds. Iron, cobalt and nickel. The platinum metals and their compounds. The inert gases. Radioactivity and the radioactive elements. Appendix. Index.

Note: (1115) In this text for pharmaceutical students and reference book for pharmacists and physicians is presented the history occurrence physical and chemical properties, tests for identity, methods of preparation, pharmacological action, and industrial and medical uses of the elements and their inorganic compounds. This edition has been revised to conform with the thirteenth edition of *United States Pharmacopeia* and the eighth edition of the *National Formulary* Quantitative determinations have been deleted and current industrial processes are described in more detail. Increasing emphasis has been placed on the chemical properties, pharmacological action, and therapeutic use of the elements.

SILVERMAN MILTON

Magic in a bottle. Second edition. New York The Macmillan Company 1948 386 p 21 cm. $3 50 892

Contents: The conquest of pain—Sertuerner and morphine. The amazing alkaloids—Pelletier and quinine. Housewife's recipe—Withering and digitalis. Blessing from hell—Koller and cocaine. Kill the germs!—Lister to Ehrlich to 606. The fever-fighters—Kolbe to aspirin. Synthetic lullaby—Fischer Von Mering, and the barbitals. Food against death—Eijkman and the vitamins. Magnificent trifles—Brown-Séquard and the hormones. The red miracle—Domagk and the sulfa-drugs Miraculous accident—Fleming, Florey and penicillin. The devil-slayers—Lecoeck to Lennox, and the drugs against epilepsy Atomic medicine—Becquerel, the Curies, and the atom-smashers. Bibliography Index.

Note A readable and dramatic account of some of the achievements of chemotherapy It is intended for lay readers.

SOKOLOFF, BORIS

The story of penicillin. Chicago Ill. Ziff Davis Publishing Company 1945 167 p 21 cm. $2.00 893

Contents: When dog eats dog Discovery of penicillin. Penicillin—Cinderella of science. Penicillin versus infection. Our friends among molds. Triumph of an idea. Footnotes. Bibliography Index.

Note: Although this is primarily popular account of penicillin, it contains footnotes and an extensive bibliography and so is of potential value to the scientist as well as to the general reader While it does not attempt to serve as guide to penicillin therapy or to discuss in detail the chemistry of the drug, it outlines what penicillin will do and what it is unable to do in the combating of infections in the human body and also gives information about the substances produced by some other molds.

SOLLMANN TORALD HERMANN

A manual of pharmacology and its applications to therapeutics and toxicology Seventh edition. Philadelphia W B Saunders Company 1948 1132 p 26 cm. $11.50 894

Contents (*abridged*) Pharmaceutic methods. Classes of pharmaceutic preparations. Prescription writing Coloring and flavoring. Administration of drugs. General toxicology Vitamins Emollients, demulcents and protectives. Local irritants, corrosives and antiseptics. Gaseous irritants and "war gases. Cathartics. Anthelmintics Convulsant poisons. Opium, morphine and related alkaloids. Drugs acting peripherally on the autonomic system. Oxytocic agents. Sex hormones. Digitalis group. The pharmacology of temperature regulation. Sulfonamide compounds. Antibiotic substances Antiseptic benzene derivatives. Theories of narcosis. Alcohol. Volatile anesthetics. Aliphatic hypnotics. Osmotic actions on cells and tissues. The reaction of the body (remote effects of acids and alkalis) Appendix—Bibliography of papers appearing since 1926. Index.

Note: (2145) A comprehensive outline of current knowledge regarding the practical importance of drugs in medicine, therapeutics, and toxicology The volume is intended for use as student text and as reference manual for the practitioner. This edition has been rearranged in double column with the statement of fundamental concepts in large type, and more detailed and specialized data condensed in fine print. Recent advances in the field of chemotherapy have necessitated new sections and chapters on such agents as the antibiotics, antimalarials, antimonial drugs, insecticides, sulfonamides, and weed-killers. New information is also included on vitamins and hormones, anticonvulsants, antithyroid agents, folic acid, curare and nitrogen mustards. The extensive 110-page bibliography includes papers published from January 1926 to date.

THIENES, CLINTON HOBART

Fundamentals of pharmacology New York Paul B Hoeber, Inc., Medical Book Department of Harper & Brothers 1947 497 p illus 22 cm. (Medical students series Fred C. Zapffe, editor) $5 75 895

Contents (*abridged*) Section I, Stimulants of the central nervous system. Section II, Depressants of the central nervous system. Section III, Drugs acting on the peripheral nervous system Section IV Drugs acting on muscles. Section Diuretics. Section VI, Antiparasitic drugs. Section VII, Hormones, special minerals, and tissue extracts. Section VIII, Vitamins. Section IX, Drugs used because of local action on body surfaces. Section X, Chemical diagnostic agents. Section XI, Actions of drugs on cells. Section XII, Pharmacy and prescription writing Index.

Note A concise introduction specifically designed for students of medicine, dentistry or pharmacy and intended as an exposition of fundamental knowledge rather than an encyclopedic treatment. The greater part of the book consists of systematized and specific information on the more important drugs and preparations. The nature, uses, dosage, physiological actions, including absorption, distribution, metabolism and excretion of each drug listed are described concisely but adequately

TOMPKINS, GEORGE R., AND S N SAMUELSEN

Medicinal products United States equivalents and alternatives alkaloids biologicals, chemicals glandular products pharmaceutical specialties, vitamins Washington, D C. Government Printing Office, 1945 107 p. 23 cm. (United States. Bureau of Foreign and Domestic Commerce. Industrial series no 11) Paper $0.50 896

Contents: Introduction. Pharmaceutical preparations and specialties. Standard pharmaceutical preparations by classes. Vitamins. Biologicals: Sera. Bacterial vaccines. Medicinal chemicals, salts, alkaloids, etc with United States equivalents and United States manufacturers and suppliers key numbers. United States manufacturers and suppliers with key numbers. Key numbers for United States manufacturers and suppliers.

Note. With additional title-pages in Spanish and Portuguese, this manual is published to serve as guide to Latin American dealers in medicinal products The main body of the publication is divided into two parts listing the equivalent and alternative preparations: one list in Spanish of products which are in particular demand in the Spanish-speaking countries of Latin America, the other list in Portuguese of products which are in particular demand in Brazil. Keyed with these lists are alphabetical and numerical lists of United States manufacturers and suppliers of medicinal products with their addresses.

WAKSMAN SELMAN ABRAHAM

The literature on streptomycin 1944–1948 New Brunswick Rutgers University Press, 1948 112 p. 24 cm. $3 00 897

Contents: First official announcement of the isolation of streptomycin. Actinomycetes: general references—antagonistic properties. Streptothricin. Streptomycin. Author index. Subject index.

Note: The 1171 entries constituting this bibliography represent an attempt "to collect all the references dealing with the various

aspects of the subject, from the first announcement of the isolation of streptomycin in January 1944 up to the present time. A chronological arrangement has been used, and the majority of the references fall within the years 1947 and 1948. The first announcement of the isolation of streptomycin, which was published in the *Proceedings of the Society for Experimental Biology and Medicine*, is reprinted in full.

WAKSMAN SELMAN ABRAHAM

Microbial antagonisms and antibiotic substances. Revised edition. New York The Commonwealth Fund 1947 415 p illus. 24 cm. $4 00 898

Contents: Soils and water basins as habitats of microorganisms. Human and animal wastes. Interrelationships among microorganisms in mixed populations. Isolation and cultivation of antagonistic microorganisms, methods of measuring antibiotic action. Bacteria as antagonists. Actinomycetes as antagonists. Fungi as antagonists. Microscopic animal forms as antagonists. Antagonistic relationships between microorganisms, viruses, and other nonspecific pathogenic forms. Chemical nature of antibiotic substances. The nature of antibiotic action. Utilization of antibiotic substances for disease control. Microbiological control of soil-borne plant diseases. The outlook for the future. Classification of antibiotic substances. Glossary Bibliography Index of microorganisms. General index.

Note The basic treatise in the rapidly developing field of antibiotics. It provides an authoritative, critical review of the literature published through about the middle of 1946. Statements in the text are keyed to the bibliography which in this edition contains more than 1050 entries. The first edition was published in 1945. In the revised edition new substances and phenomena reported since 1944 are discussed, and there is much new material on penicillin and on streptomycin—discovered by the author. Some material of historical interest only and some on the clinical uses of penicillin has been dropped.

WOOD GEORGE BACON

The dispensatory of the United States of America. The 24th edition based on the thirteenth revision of the United States Pharmacopeia, The National Formulary eighth edition, and The British Pharmacopoeia 1932 and its Addenda. By Arthur Osol and George E Farrar Jr., with E Emerson Leuallen, Willard F Verwey Heber W Youngken, and David K. Detweiler Advisory editor Horatio C Wood, Jr Philadelphia J B Lippincott Company 1947 1928 p illus 27 cm. $20.00 899

Contents (abridged) Part I, Drugs recognized by the United States Pharmacopeia, The Pharmacopoeia of Great Britain or The National Formulary Part II, Drugs not official in the United States Pharmacopeia, The Pharmacopoeia of Great Britain, or The National Formulary Part III, General tests, processes, reagents and solutions. Part IV Veterinary uses and doses of drugs. Part Tables of the United States Pharmacopeia or The National Formulary Supplement of changes authorized by the First U.S.P. XIII Supplement and the first supplement to The National Formulary, eighth edition. Index.

Note (2152) In this standard work the following data are given for each drug: official titles, synonyms, abbreviations, definitions, unofficial synonyms and foreign language titles, source or manufacturing process, history therapeutic uses, toxicology dosage, storage directions, and official preparations. The revisions made in this edition consist primarily of the inclusion of the many drugs which have been developed or received official recognition since the 1943 edition, particularly in the field of antibiotic substances. Therapeutic uses and dosages are now discussed at greater length, and pertinent literature is summarized and referred to more frequently. Other changes include the addition of manufacturers names in the case of trade name products, and new section dealing with the uses and doses of drugs employed in veterinary medicine.

YEAR BOOK OF GENERAL THERAPEUTICS

The 1948 Year book of general therapeutics edited by Oscar W Bethea. Chicago The Year Book Publishers Inc. 1949 480 p. illus 19 cm. (The practical medicine year books) $4 25 900

Contents (abridged) Introduction. General therapeutic technic. Sulfonamides. Penicillin. Streptomycin Other antibiotics. Bacteriostatic agents. Amebicides. Antimalarials. Antirheumatics. Antibodies and antigens. Blood restoratives. Vitamins. Protein and amino acid therapy Hormones. Anesthetics Sedatives, hypnotics and antispasmodics. Antithyroid drugs. Histamine and antihistaminic agents. Drug treatment of headache. Drugs acting on the heart and blood vessels. Treatment of malignant conditions. Miscellaneous. Index. Index to authors.

Note. (2144a) As in the other volumes of this useful series, the chapters are composed of abstracts of significant articles, selected from the world's medical periodicals. The reference to the original publication is always given in the form of footnote. Frequently the abstract is supplemented by an evaluatory note by the editor There are about 60 illustrations in the present issue.

YOUNGKEN HEBER WILKINSON

Textbook of pharmacognosy 521 illustrations. Sixth edition. Philadelphia The Blakiston Company 1948 1063 p illus. 23 cm. $8.50 901

Contents Part I, Fundamental and morphological considerations of drugs: Fundamental considerations. Morphological classification of crude drugs. Therapeutic classes of drugs. Part II, Taxonomic consideration of drugs: Drugs of vegetable origin. Drugs of animal origin. Antibiotics and bacterial biological products. Microanalytical methods. Bibliography Index.

Note (2134) A long established textbook, used in American colleges of pharmacy since the publication of the first edition in 1921. It is also used as reference manual in the crude drug trade. The chapter on drugs f vegetable origin accounts for 640 of the book's pages and provides full descriptions, which are usually accompanied by illustrations, of all the useful drugs of this class. This edition exhibits numerous revisions many of hich were made to bring the text into harmony with the thirteenth revision of the *United States Pharmacopeia*, and the eighth edition of the *National Formulary*. The chapter on antibiotics is new as are substantial parts of several other chapters.

PHYSICAL THERAPY

BIERMAN WILLIAM

Physical medicine in general practice. Second edition, revised and enlarged. With a chapter on medical rehabilitation by Sidney Licht. With 310 illustrations New York Paul B Hoeber Inc. Medical Book Department of Harper & Brothers 1947 686 p illus. 24 cm. $8 00 902

Contents Heat and cold. Hydrotherapy Climatotherapy and spa therapy Visible and infra-red radiation. Long wave diathermy Short wave diathermy Fever therapy Surgical diathermy Galvanic current. Ultraviolet radiation. Massage. Exercise. Occupational therapy Medical rehabilitation The conduct of treatments Diseases of the locomotor system. Neurological diseases. Cardiovascular diseases. Diseases of the digestive system. Genito-urinary diseases. Gynecological diseases. Diseases of the eye, ear nose, and throat. Respiratory diseases. Dermatological diseases. Appendix. Index.

Note (2173) This manual for physicians, technicians, nurses, and physical and occupational therapy aides explains the techniques for applying, using, and understanding thermal, mechanical, electrical, and chemical therapeutic measures. Numerous drawings depicting step-by-step procedures and illustrating the author' own techniques are closely integrated with the text. In this edition recent advances in such fields as the use of early ambulation and the combination of penicillin with fever in the treatment of syphilis have been incorporated into the original text and new chapter on medical rehabilit tion has been added. Brief bibliographies are included at the en of each chapter

DANIELS LUCILLE AND OTHERS

Muscle testing techniques of manual examination by Lucille Daniels Marian Wil

liams, and Catherine Worthingham Designed and illustrated by Harold Black with 349 diagrammatic line drawings. Philadelphia W B Saunders Company 1946 189 p illus. 28 cm. Paper $3 00 903

Note Evaluation of the residual strength of injured muscles is of importance both in the field of physical therapy and the field of orthopedic surgery This book describes in detail techniques for the carrying out of systematic examinations to determine muscle strength. The various methods which have been offered for the grading of manual muscle tests are compared briefly in the book's introduction. After this introduction the entire space is given to illustrations of tests of individual muscles and muscle groups. The illustrations are supplemented by directions for classifying the results as "normal and good, "fair and "poor The two authors whose names are mentioned first in the title are teachers of physical therapy at Stanford University The third author is Director of Professional Education of the National Foundation for Infantile Paralysis, Inc.

EWERHARDT, F H., AND GERTRUDE F RIDDLE

Therapeutic exercise. Philadelphia Lea & Febiger 1947 152 p illus. 24 cm. $2 50. 904

Contents: Introduction to therapeutic exercise. Analysis of joint motion Brief review of muscles participating in joint movements. Physiology of skeletal muscle. Plexuses of nerves controlling the upper and lower extremities. Physiology of therapeutic exercise. Special applications of therapeutic exercise. Application of therapeutic exercise in medicine. Poliomyelitis. Spastic paralysis. Index.

Note. A brief description of special exercises and the manner of their application in the treatment of various diseases, in the re-education of muscles, and in the correction of faulty posture. The anatomy of muscles and the physiology of muscle contraction are discussed in outline, but considerable attention is given to the characteristics and mechanism of muscular action. The book is written primarily for the use of students of physical education, occupational therapy and physical therapy but the methods discussed will also be of value to the general practitioner. A short bibliography is included.

KOVÁCS RICHARD

Electrotherapy and light therapy with the essentials of hydrotherapy and mechanotherapy Fifth edition thoroughly revised. Illustrated with 352 engravings and a color plate. Philadelphia Lea & Febiger 1945 694 p illus. (part col d) 24 cm. $8.50 905

Contents (abridged) Part I, Electrophysics Part II, General electrotherapy and electrodiagnosis: Electromedical currents, apparatus and accessories. Effects of electromedical currents—general rules of treatment. Electrophysiology Electrodiagnosis. Currents of low frequency High-frequency currents and apparatus. Medical diathermy Hypertherapy Electrosurgery Electrical injuries. Part III, Light therapy: Infrared and luminous radiation. Ultraviolet radiation—physics and effects. Heliotherapy Artificial ultraviolet therapy Part IV Essentials of hydrotherapy and mechanotherapy: Hydrotherapy Massage Exercise. Part Applied physical therapy: Cardiovascular conditions. Chronic arthritis and fibrositis. Affections of the central nervous system. Affections of bones, joints, muscles and tendons. Gynecological conditions Genito-urinary conditions. Proctological conditions, by R. V Gorsch. Dermatological conditions. Diseases of the ear, nose and throat, by W Merrens. Physical therapy in office practice. Physical therapy in institutional practice. Glossary Author's index. Subject index.

Note: A standard presentation of the applicability and techniques of electrotherapy and light therapy The treatment is essentially from the viewpoint of physicians who will use these therapies in their offices. In the present edition the work has been rather extensively revised There are several new chapters, and many of the older chapters have been expanded in the light of developments since the previous edition.

SOIBELMAN DORIS

Therapeutic and industrial uses of music a review of the literature. New York Columbia University Press, 1948 274 p 20 cm. $3.00 906

Contents Introduction. Opinions based on empirical methods. Experiments on physiological effects. Experiments on mood effects. Some interpretations. The application of music. Music in occupational and physical therapy Music and anesthesia. Music in industry Summary Bibliography Index.

Note Essentially summation of the more important findings regarding the medical uses of music, as reported in the rather extensive literature of the subject. The mode of treatment is selective and only those papers hich report factual data and actual experiments are discussed. An appraisal of the arguments for and against the use of music as therapeutic agent is presented in the final chapter The majority of the references cited in the thirty-six page bibliography fall within the period 1940 to 1947

WATKINS, ARTHUR L , editor

Physical medicine in general practice. Philadelphia J B Lippincott Company 1946 341 p illus. 23 cm. (The American practitioner series) $5.00 907

Contents: History and development of physical medicine, by F H. Krusen. Some factors to be considered in prescribing physical medicine, by E. C. Elkins. Physical therapy in medical conditions, by R. Kovacs. The use of physical agents in dermatology by A. C. Cipollaro. The principles of the physical treatment of minor injuries, by W H. Northway Physical medicine in the treatment of fractures, by M. E. Knapp. Physical therapy in some common orthopedic disabilities, by J. G. Kuhns. Physical medicine and neurology by A. L. Watkins. Physical medicine in acute and convalescent poliomyelitis, by R. L. Bennett. Physical therapy and occupational therapy in psychiatry by V R. Hall. Rehabilitation and employment, by G. G. Deaver Aspects of physical therapy and reconditioning in some of the army hospitals, by O. L. Huddleston. Fever-chemotherapy by H. W Kendell. Uses of cold in medicine and surgery by F M. Allen. Index.

Note A collection of essays which appeared originally in *Clinics*, April, 1944. Together they constitute an introduction to physical medicine in which the emphasis is on the scope of physical medicine and on its basic principles rather than on specific techniques. The authors are all specialists of long experience who are associated with leading medical schools or hospitals. Short lists of selected literature accompany each paper.

WILLARD HELEN S., AND CLARE S SPACKMAN

Principles of occupational therapy 46 illustrations. Philadelphia J B Lippincott Company 1947 416 p illus 21 cm. $5 00 908

Contents: Section One, Basic concepts: History and development of occupational therapy by W R. Dunton, Jr The scope of occupational therapy by H. McNary Educational aims in occupational therapy by M. Fish. Activities in occupational therapy by W M. Edgerton. Factors in the organization of occupational therapy departments, by M. E. Merritt. Section Two, Applied principles of occupational therapy: Occupational therapy for patients with mental disease, by B D. Wade. Occupational therapy in general and special hospitals, by E. V Fay and L March. Occupational therapy in children's hospitals and pediatric services, by G. M. Chavez. Occupational therapy for patients with physical injuries Part 1—Treatment for limitation of motion of joints, flaccid paralyses and industrial injuries, by C. S. Spackman. Part 2—Occupational therapy for patients with cerebral palsy by R. W Brunyate. Part 3—Occupational therapy for patients with arthritis, by M. L. Blodgett. Occupational therapy for the tuberculous, by H. Hudson. Occupational therapy for the visually handicapped, by E. L. Hutchinson. Occupational therapy in the United States Army hospitals, World War II, by W C. Kahmann and W West. Occupational therapy in the hospitals of the United States Navy World War II, Part 1—The rehabilitation program in the U S. Navy by H. H. Montgomery Part 2—The scope of occupational therapy in the hospitals of the U. S. Navy by L. Bownell. The rehabilitation program of the Veterans Administration, by C. R. Brooks. Index.

Note: In this book important aspects of occupational therapy are discussed by specialists who are, for the most part, associated with the administration of this technique in civilian, military and naval hospitals in the United States of America. The work is suitable as source of information on the subject and also for use as textbook in nurse-training courses.

WOODCOCK, BEATRICE
Scoliosis the practical approach to treatment. Stanford, Calif Stanford University Press 1946 111 p illus. 22 cm. $2 00 909

Contents. Part I, Introduction. Change of outlook. What is scoliosis? Rotation and deviation. Compensation. Part II, First principles in the gymnastic program. Appendix Index.

Note In the first part of this useful book the author discusses the morphology of curvature of the spine, the skeletal and muscular changes produced by it, and how nature can be aided in making compensatory adjustments such as counter-curves. The latter part describes and illustrates corrective exercises. The author has had long experience in the field, part of it under Dr Arthur Steindler at the University of Iowa. The book is addressed chiefly to physical therapists, but medical practitioners, particularly pediatricians, also will find it of interest.

YEAR BOOK OF PHYSICAL MEDICINE
The 1947 Year book of physical medicine, edited by Richard Kovács. Chicago Year Book Publishers Inc., 1948 432 p illus. 19 cm. (The practical medicine year books) $3 75 910

Content (*abridged*) Part I, Physical therapeutic methods Thermotherapy Electrotherapy Electrodiagnosis. Light therapy Hydrotherapy Thalassotherapy Climatotherapy Mechanotherapy Occupational therapy Institutional work. Convalescence and rehabilitation. Physical fitness and physical education. Industrial medicine. Part II, Applied physical therapy Cardiovascular conditions. Respiratory conditions. Gastrointestinal and metabolic conditions. Cancer diagnosis Arthritis and rheumatoid conditions. Traumatic conditions. Orthopedic conditions. Paralyses. Neurologic conditions. Mental conditions. Pediatric conditions. Gynecologic conditions. Urologic conditions. Proctologic conditions. Dermatologic conditions. Otorhinolaryngologic conditions. Index. Index to authors.

Note: (2163) An annual publication organized on the plan of the other books in this useful series. In it selections from the world literature of this subject are classified and summarized. Each chapter is made up of a number of abstracts of considerable length (300–400 words) A footnote reference to the original article is given in all cases. Frequently the abstract is accompanied by a short critical or supplementary note by the editor

NUTRITIONAL THERAPY

BARBORKA CLIFFORD JOSEPH
Treatment by diet. Fifth edition. 14 plates, including 13 in color Philadelphia J B Lippincott Company 1948 784 p illus. (part col d) 26 cm. $12 50 911

Content (*abridged*) Part I, Diet in health Part II, The application of diet therapy Part III, Diet in disease, Section A, Diseases in which diet is of paramount importance Diabetes mellitus. Gout. Overweight—obesity Underweight—emaciation Nephritis. Diseases of the digestive tract. Deficiency diseases. Section B Conditions in which diet is of varying importance Diseases of circulation. Febrile diseases. Diseases of esophagus and stomach. Diseases of the liver. Diseases of the gallbladder Diseases of the intestines Food allergy Diseases of the urinary tract. Addison's disease. Hyperinsulinism. Protein and amino acids in nutritional therapy Chronic arthritis. Pregnancy and lactation Ketogenic diet. Diet and skin diseases. Part IV Routine hospital diets—preoperative and postoperative dietary management. Part Appendix. Bibliography Index.

Note An encyclopedic manual of nutrition and diet, which has been specifically designed for the use of general practitioners of medicine. A brief description of each disease precedes the discussion of dietary considerations and principles in connection with it. A large part of the text consists of tables of dietary information and menus which have been worked out to meet specific disorders or nutritional requirements. There are brief mentions of certain other therapies used with dietary treatment. In this edition the work has been very substantially revised. There is a new chapter on deficiency diseases and another on diseases of the skin. Changes in the illustrations include a new series of color plates, which show comparative servings of various kinds of food as recommended by the Food and Nutrition Board of the National Research Council. The bibliography is exceptionally full.

GORDON, EDGAR STILLWELL
Nutritional and vitamin therapy in general practice. Third revised edition Chicago The Year Book Publishers, Inc., 1947 410 p. illus. 21 cm. (The general practice manuals) $5.50 912

Contents. What is a vitamin? Vitamin A. The vitamin B complex. Thiamine. Riboflavin. Nicotinic acid—niacin. Other B complex factors. Ascorbic acid. Vitamin D Vitamin E. Vitamin K. Minerals. Protein. Fuel foods. Carbohydrate. Fat. Weight control. Dental problems in nutrition. The economic side of nutrition. Appendix. Index.

Note. Essentially this book is a working manual for the general medical practitioner. It deals chiefly with the vitamins and nutrition and the emphasis is on the avitaminoses and their therapy It has purposely been made compact. The essential facts are stated, but case histories, lengthy discussions, menus, and bibliographies are not included. A considerable number of revisions have been made in preparing this edition in order to make available knowledge gained since 1942.

SPIES TOM DOUGLAS
Rehabilitation through better nutrition. University of Cincinnati studies in nutrition at the Hillman Hospital Birmingham, Alabama, from the Department of Internal Medicine, University of Cincinnati College of Medicine. Philadelphia W B Saunders Company 1947 94 p illus (part col d) 24 cm. $5 00 913

Content The Birmingham study: Diagnosis—Vitamin A deficiency Niacin deficiency (pellagra) Thiamine deficiency Riboflavin deficiency Vitamin C deficiency (scurvy) Other vitamin deficiencies. Anemia. Pernicious anemia. Nutritional macrocytic anemia. Hypochromic microcytic (iron deficiency) anemia. Nontropical sprue. Protein deficiency Edema. Therapeutic principles and results—4000 calorie liquid diet. 4000 calorie semi-solid diet. 4000 calorie solid diet. Low calorie diet. Synthetic vitamins, dried brewers' yeast powder, and liver extract. Recapitulation. References. Index.

Note. An important work on nutritive therapy It is based on 893 cases of persons suffering from nutritional deficiency diseases who were treated at Hillman Hospital in 1945, but only a few case histories are reported in any detail. Instead the methods and results of the study are summarized in a form that can be used by professional workers in nutrition and by general practitioners of medicine. The seven-page bibliography is composed entirely of citations of periodical articles in which fuller reports of the observations made during the study are available.

TURNER, DOROTHEA
Handbook of diet therapy Chicago The University of Chicago Press 1946 112 p. 23 cm. (The University of Chicago Committee on Publications in Biology and Medicine) $2 00 914

Contents (*abridged*) Normal diet: Correlation of the dietary intake with the need of the individual for specific nutrients. Modifications of basic dietary plan during pregnancy lactation and childhood. Adaptations of the normal diet for therapeutic purposes: Liquid diet. Bland diet. Low-caloric diet. High-caloric diet. Diabetic diet. High-protein diet. Low-purine diet. Ketogenic diet. Acidic and basic elements in the diet. Interviewing the patient. Appendix Food composition table for short method of dietary analysis (revised) Cholesterol content of food. Mineral elements and excess of acidity or alkalinity per 100 gm. of foods. Glossary of dietetic terms. Index.

Note A concise guide to the planning and organizing of therapeutic diets, written so as to be of practical value to dietitians, medical practitioners, and students. It summarizes a series of studies conducted by the American Dietetic Association and National Research Council, and stresses the need for adopting simplified methods for calculating the nutritive content of diets. Instead of itemizing numerous specific diets the author outlines basic or foundation diets which may be adapted to meet special needs. The tables of food composition were prepared by the Bureau of Human Nutrition and Home Economics of the U S. Department of Agriculture.

WOHL, MICHAEL GERSHON editor

Dietotherapy clinical application of modern nutrition. With a foreword by Russell M Wilder Philadelphia W B Saunders Company 1945 1031 p illus. 24 cm. $12.00 915

Contents (abridged) Part I, Normal nutrition The physiology of the gastro-intestinal tract and its bearing on nutrition, by F C. Mann and J. L. Bollman. Water metabolism, by J Harold Austin. Trace elements in nutrition by Carl V Moore and W T Salter Calcium and phosphorus, by J. O. Holmes Vitamin A in health and disease, by L. E. Booher The vitamin B complex, by B. Sure and others. Vitamin C in health and disease, by G. Dalldorf. Vitamin D in health and disease, by D. J McCune. Vitamin E in health and disease, by J. H. Jones. Vitamin K, by J F Weir. Vitamin interrelationships, by B. Sure. The laboratory diagnosis of vitamin deficiency by H. Field, Jr Nutrition, income and budgeting, by R. M. Leverton. Part II, Nutrition in periods of physiologic stress: Nutrition in pregnancy by P F Williams. Nutrition in infants and children, by W E. Nelson and Norman Kendall. Nutrition in the aged, by J H. Musser Nutrition in relation to infection and immunity by J. A. Kolmer. Nutrition and the athlete, by E. R. Yeomans. Part III, Nutrition in disease: Nutrition in relation to dentistry by C. F Bodecker and L. R. Cahn. Nutrition in digestive diseases, by B. B. Crohn and others. Dietary treatment of diabetes mellitus, by H. F Root and C. C. Bailey Nutrition in urologic diseases, by A. Randall and B. Hughes. Nutrition in cardiovascular disease, by G. M. Piersol and others Nutrition in the allergies, by A. H. Rowe. Nutrition in rheumatism, arthritis and gout, by R. Pemberton and C. W Scull. Nutrition and diseases of the skin, by C. S. Wright. Nutrition in Addison's disease, by L. G. Rowntree. Nutrition in obesity and leanness, by M G. Wohl and C. W Dunn. Nutrition and pernicious anemia and the related macrocytic anemias, by C. V Moore. Nutrition in diseases of the nervous system, by F H. Lewy and Harry Shay Nutrition in infectious diseases, by J. A. Toomey Nutrition in the care of the surgical patient (preoperative and postoperative), by I. S. Ravdin and Harold A. Zintel. Amino acids as protein nourishment, by R. Elman. Appendix. Index.

Note. In this volume, fifty-eight leading investigators in the fields of food and nutrition have collaborated to produce a comprehensive and authoritative work. The book is designed to serve as a text and reference manual for medical students and general practitioners, and emphasizes the importance of the various nutrients required in a normal functioning body Because of its broad scope, each chapter provides a concise rather than an exhaustive review of current advances and applications in each particular phase of the subject. Extensive bibliographies are included with each paper.

RADIOLOGY

ARCHER VINCENT WILLIAM

The osseous system a handbook of roentgen diagnosis. Chicago The Year Book Publishers Inc. 1945 320 p illus. 21 cm. $6.50 916

Contents (abridged) Technic General principles of interpretation. Normal bones and joints and their injuries Differentiation of fractures from nontraumatic abnormalities Injuries to the skeletal system other than the spine: Shoulder and clavicle. Elbow joint. Carpal bones. Phalanges. Ribs. Pelvis. Sacrum and coccyx Ankle joint. Spine—general considerations. Bone diseases and abnormalities in childhood. Bone diseases occurring principally in adult life. Aseptic necrosis. Index.

Note: This volume covers the X-ray examination of the skeletal system and is intended to serve as a concise guide for the physician who only occasionally carries out radiologic examinations. The discussion of technique is very brief and is limited to mention of special points in connection with bone films. The remainder of the book deals with interpretation of roentgenograms and the presentation is in atlas form with reproduction of roentgenograms on right-hand pages and analyses of them on the facing left-hand pages. The author is Professor of Roentgenology in the Department of Medicine of the University of Virginia.

BLOOM WILLIAM editor

Histopathology of irradiation from external and internal sources. New York McGraw Hill Book Company Inc., 1948 808 p illus. (part col d) 23 cm. (National nuclear energy series) $8.00 917

Contents. Introduction by W Bloom. Materials and methods, by R. G. Murray and others. The cell, by W Bloom. The skin, by R. S. Snider Bone by M. Heller Bone marrow, by M. A. Bloom. The spleen, by R. G. Murray Lymph node and intestinal lymphatic tissue, by P P H. De Bruyn. The thymus, by R. G. Murray The gastrointestinal tract, by M. Pierce. Structures accessory to the gastrointestinal tract, by R. P Rhoades. The testis, by M. Heller The ovary by W Bloom. The kidney by W Bloom. The lung, by R. P Rhoades. The vascular system, by R. P Rhoades The adrenal, by R. P Rhoades. The nervous system, by R. S. Snider Summary by W Bloom. Appendix—Experiments listed by agent, animal species, and mode of administration. Bibliography Alphabetical list of experiments. Index.

Note: A condensed account of fundamental research carried out as part of the program of the Manhattan District Project during the years 1943–1945. The experiments were carried out on small animals, and their purpose was to accumulate knowledge of the histological effects of various types of radiation applied in various ways. Although there is some description of methods, most of the text is devoted to reports and evaluations of findings. There are several hundred reproductions of microphotographs. The volume is the first one published of a series which will eventually consist of about sixty volumes, and will be an official presentation of results of the tremendous program of research which accompanied the development of the atomic bomb.

BUCKSTEIN, JACOB

The digestive tract in roentgenology 1030 illustrations in 659 figures. Philadelphia J B Lippincott Company 1948 889 p illus. 26 cm. $18.00 918

Contents (abridged) Introduction History of roentgenology of the alimentary tract. The hypopharynx and esophagus: Congenital anomalies of the esophagus. Diverticula of the esophagus. Benign tumors of the esophagus. Malignant lesions of the esophagus. Foreign bodies in the esophagus. Syphilis and tuberculosis of the esophagus. "Thoracic stomach" (congenitally short esophagus) The stomach Chronic gastritis. Gastric ulcer Benign tumors of the stomach. Bezoars and other foreign bodies of the stomach. Malignant tumors of the stomach. Syphilis and tuberculosis of the stomach. The duodenum Duodenal ulcer Diverticula of the duodenum. Carcinoma and other tumors of the duodenum. The small intestine The small intestinal pattern in steatorrhea, hypoproteinemia and scleroderma. Congenital occlusion of the small intestine, retroperitoneal hernia, displacement of the small intestine. Obstruction of the small intestine. Tumors of the small intestine. Ascariasis. The large intestine The appendix Constipation and spasticity of the colon. Granulomas and benign tumors of the colon. Malignant lesions of the colon. Ulcerative colitis. Intestinal tuberculosis. Herniation and eventration of the diaphragm. The gallbladder and bile ducts: Cholecystographic diagnosis of gallbladder disease. Congenital anomalies of the gallbladder Biliary fistulae. The spleen, liver and pancreas. Bibliographic index Subject index.

Note. This book is the result of twenty-five years experience in coordinating the findings of roentgenology and those of autopsy in cases of gastrointestinal tract disease seen at Bellevue Hospital. The aim is to present to both surgeon and internist, and to the general practitioner a full discussion of roentgenologic techniques in the diagnosis of functional and organic lesions of the digestive tract. In each condition studied a brief description of the condition precedes the ample discussion of the X ray technique and its correlation with clinical, pathological and other data in diagnosis Case histories are given in so far as they are pertinent. This book is presented as a new volume. It is, however similar to the author's *Clinical roentgenology of the alimentary tract* Philadelphia. W B. Saunders Company 1940; and it contains enough repetition of the earlier work so that it could be considered as a thorough revision and expansion of an earlier edition. An exceptionally large number of case histories are described.

CAFFEY JOHN

Pediatric X-ray diagnosis a textbook for students and practitioners of pediatrics surgery & radiology Chicago The Year Book Publishers, Inc., 1945 838 p illus. 26 cm. $14.00 919

Contents (abridged) Section I, The head and neck Congenital dysplasias of the skull. The skull in the congenital skeletal dystrophies. Infections of the skull. Hyperostoses. Diseases of endocrine glands. Diseases of the blood Paranasal sinuses. Temporal bone. Intracranial structures. Intracranial pneumography The neck. Section II, The thorax: The thoracic walls. The respiratory tract. Pathologic intrathoracic changes. Primary pulmonary tuberculosis.

The mediastinum. The heart. Section III, The abdomen and gastro-intestinal tract. Diseases of the abdominal walls. The liver. The biliary tract. The spleen. The digestive tract. Section IV. The pelvis and genito-urinary tract. Section V. The extremities: The soft tissues. The bones. The joints. Section VI, The vertebral column. Normal vertebral column. Congenital disturbances. Traumatic lesions. Diseases involving vertebral column. Index.

Note. A comprehensive treatise which has been developed from conferences which have been held semimonthly over a period of twenty years at the Bellevue Hospital, New York. The material is arranged chiefly according to anatomical relations. Under each anatomical region, the conditions associated with it, which are of interest in roentgenology, are discussed. Generally speaking, there is a brief description of the specific disease or abnormality, and this is followed by a longer discussion of the anatomy and pathology in relation to roentgen diagnosis. The making of X-ray photographs and their interpretation are fully covered. References to the work of other authorities appear only occasionally in the text proper, but there are numerous lists of the related literature scattered throughout the work. There are 711 figures, the majority of which are reproductions of roentgenograms.

Farrell, John Thompson Jr.

Roentgen diagnosis of diseases of the gastrointestinal tract. Springfield, Ill. Charles C Thomas 1946 271 p illus 24 cm. $6.50 920

Contents: Introduction and outline of text. Esophagus. Stomach. Small intestine. Colon. Appendix. Rectum. Anus. Combined diseases of the stomach and intestine. Diseases of the intestines. Subject index.

Note. The purpose of this volume is to provide the roentgenologist, general practitioner, and surgeon with a practical and systematic guide to the methods of examination and diagnosis of gastrointestinal diseases. The material is arranged almost in outline form with brief descriptions of techniques and pathological conditions given under the major division of the gastrointestinal tract. Brief explanatory notes accompany each of the many roentgenograms used to illustrate the textual material. Since the volume is not intended for use as a basic reference tool, lists of references are not included.

Feldman, Maurice

Clinical roentgenology of the digestive tract. Third edition Baltimore The Williams & Wilkins Company 1948 901 p illus. 24 cm. $8 00 921

Contents. The esophagus. The stomach. The duodenum. The small intestine. The colon. Hernia. Diaphragm. The appendix. The gall bladder. The biliary ducts. The liver. The pancreas. The peritoneum. The omentum. The mesentery and retroperitoneal tumors. Lymphomatous diseases. The abdominal vessels. The spleen. Deficiency diseases. Miscellaneous.

Note. A comprehensive reference book of information useful in the interpretation of roentgenograms of the digestive tract. It is used primarily by roentgenologists but is also valuable to specialists in gastroenterology and internal medicine who wish to understand the interpretation of such roentgenograms. Specific disorders and diseases are discussed concisely. In practically all instances the following points are covered: etiology, pathology, incidence, age and sex of typical patients, clinical aspects, symptoms, associated conditions, roentgen diagnosis, and differential diagnosis. References to related literature then follow immediately. In comparison to the second edition, published in 1941, the present edition has been very substantially revised. The main chapter headings are the same but within the chapters there are numerous discussions of conditions not treated in the earlier edition, and discussions of conditions considered there have in many cases been rewritten. The book is now about 100 pages longer and it contains 641 illustrations.

Golden, Ross

Radiologic examination of the small intestine. With illustrations of 183 subjects in 75 figures. Philadelphia J B Lippincott Company 1945 239 p illus 26 cm. $7 50 922

Contents. General introduction. Embryology, anatomy and physiology of the normal small intestine. The normal small intestine on roentgen examination. The small intestine of the infant. Peritoneal adhesions and ileus. The Miller-Abbott tube in the diagnosis and treatment of ileus. Disorders of nutrition. Diseases of the mesentery. Allergy. Inflammations. Neoplasms. Certain conditions of developmental origin. Some effects of food on the small intestine. Effects of certain drugs. Miscellaneous conditions. Bibliography. Index.

Note. The scope of this monograph is somewhat broader than the title indicates; for although the emphasis is on the use of X-rays in diagnosing diseases of the small intestine, much related material is also included. The book is intended primarily for roentgenologists and secondarily for gastro-enterologists. It is generally recognized that only a beginning has been made in understanding and diagnosing the diseases of the small intestine; nevertheless the amount of information assembled here from the literature and from the author's own experience is impressive. The illustrations are chiefly reproductions of roentgenograms. The bibliography contains 200 references.

Hodges, Fred Jenner and others

Radiology for medical students by Fred Jenner Hodges, Isadore Lampe and John Floyd Holt. Chicago The Year Book Publishers Inc. 1947 424 p illus. 21 cm. $6 75 923

Contents. Introduction. Part I, Diagnostic radiology: General view of diagnostic radiology. The head. The spine and extremities. The thorax. The gastrointestinal tract. The genitourinary tract. Part II, Therapeutic radiology: General view of therapeutic radiology. Skin, lips and oral cavity. The head and neck. The breast and female genital tract. Male genitalia and urinary tract. Lymphoblastomas and leukemias. Bone; chest; gastrointestinal tract, central nervous system. Infections and miscellaneous conditions. Index.

Note. This concise text for undergraduate medical students covers basic principles and techniques of the diagnostic and therapeutic uses of X-rays and radium. More than half the volume deals with diagnosis and interpretation of roentgenograms. The remaining chapters provide an overall picture of the use of radiation in clinical therapy. The authors, all members of the Department of Roentgenology of the University of Michigan, have assumed that the student will be familiar with basic X-ray equipment and radiation physics, hence these topics are only briefly discussed.

McDonald, Ellice, editor

Neutron effects on animals by the staff of the Biochemical Research Foundation Dr Ellice McDonald, director Baltimore The Williams & Wilkins Company, 1947 198 p. illus. 23 cm. $3 00 924

Contents. Radiation effects on cells, by E. McDonald. Comparison of physical properties of fast neutrons with those of some other forms of radiation, by T. Enns. Fast neutron-irradiation procedure, by T. Enns, H. M. Terrill, and James M. Garner, Jr. Relation between neutron dose and the mortality, body weight, and hematology of white rats, by J. L. Leitch. A study of possible reactions of microorganisms to sublethal bombardment with neutrons, by R. K. Jennings and J. M. Garner, Jr. Effect of neutrons on the resistance of mice to staphylococcus infection, by J. O. Ely and M. H. Ross. Effects of neutrons on early root development of Zea mays, by Mary A. Russell and James M. Garner, Jr. The effect of neutron radiation on serum alkaline phosphatase activity, by F. E. Rabhart. The effect of neutron radiation on the peroxidase and catalase activity of bone marrow, by Gladys E. Woodward. Effect of neutrons on the cholinesterase in rabbit blood and tissues, by C. A. Zittle. Studies of proteolytic enzymes in bone marrow, by W. G. Batt and C. A. Zittle. Effect of neutron irradiation on proteins of centrifuged bone marrow and blood plasma of rabbits, by L. E. Krejci, J. L. Leitch, and L. Sweeny. Electrophoresis of blood plasma of neutron-irradiated chickens, by L. E. Krejci and L. Sweeny. Electrophoresis of the plasma of rabbits irradiated with neutrons, by E. B. Sanigar, Carl L. Miller and M. N. Madden. Electrophoresis of the plasma of dogs irradiated with neutrons, by E. B. Sanigar. The ultraviolet absorption spectra of plasma and hemoglobin solutions from the blood of neutron-irradiated rabbits and dogs, by E. B. Sanigar. Some physiological responses of rats to neutron irradiation, by J. O. Ely and M. H. Ross. Effects of neutrons on white blood cell count and blood sedimentation rate of rats, by M. H. Ross and J. O. Ely. Effects of large doses of neutrons on dogs, by M. H. Ross and J. O. Ely. Changes produced in testes, spleen, bone marrow, liver and kidneys of rats by neutron irradiation, by J. O. Ely, M. H. Ross, and D. M. Gay. Index. Dosage index.

Note. A collection of papers that is intended only as a general survey of the problem of neutron effects on animals, and whose chief purpose is to point the way to further research. References to the pertinent literature accompany most of the papers.

RIGLER, LEO GEORGE

The chest a handbook of roentgen diagnosis. Chicago The Year Book Publishers Inc., 1946 352 p. illus. 21 cm. $6.50 925

Contents (abridged) Introduction: Methods of examination. Normal observations: Normal chest. Physiology of respiratory tract. Pathologic conditions: Diseases of bronchi and lungs. Diseases of mediastinum. Diseases of pleura. Interpretation of roentgenograms of chest. Lungs and bronchi. Miscellaneous types of pneumonia. Foreign bodies in the respiratory tract. Pulmonary abscess. Cysts of the lung. Sarcoidosis. Tumors of chest. Pulmonary metastases. Mediastinum. Pleura. Thorax—postoperatively Lungs—postoperatively Bibliography Index.

Note. A concise guide to the interpretation of roentgenograms of the chest. It is designed mainly for general medical practitioners. Most of the presentation is in atlas form with reproductions of actual roentgenograms on right-hand pages and analyses of them on the facing left-hand pages. Over 300 cases are illustrated. The author is Professor and Chief of the Department of Radiology of the University of Minnesota Medical College.

ROBERTSON JOHN KELLOCK

Radiology physics an introductory course for medical or premedical students and for all radiologists. Second edition. New York D Van Nostrand Company Inc. 1948 323 p. illus. 23 cm. $5 00 926

Contents Alternating currents Production of high voltage, Part I. Measurement and control of high tension voltage. Cathode rays. Positive rays and isotopes Roentgen tubes. Valve rectification. High frequency currents. Light visible and invisible. General properties of X rays. Measurement of wave length of X-rays. Secondary X-rays and absorption. Roentgen ray dosage. Radioactivity Production of high voltage, Part Supervoltage tubes and high speed particles. Transmutation of matter and neutrons. Artificial radioactivity, mass, and energy Uranium fission and atomic piles. Appendix. Index.

Note. (1302a) This text is planned chiefly for the use of premedical students during the second year of two-year physics course. It provides thorough introduction to the basic principles and theories underlying the construction and operation of X-ray equipment and related apparatus. The general scope and purpose of the 1940 edition have been retained, but much of the material has been revised to include recent developments in the field of atomic physics. Accordingly the subject of artificial radioactivity is treated at greater length and new chapter has been added on atomic fission. Other new sections deal with the separation of isotopes, heavy water low voltage tubes, Geiger-Mueller counters, and the betatron.

SCHWEDEL JOHN BERNARD

Clinical roentgenology of the heart. With seven hundred and forty-nine illustrations on two hundred and thirty-two figures. New York Paul B Hoeber Inc., Medical Book Department of Harper & Brothers, 1946 380 p illus. 27 cm. (Annals of roentgenology Vol. XVIII) $12.50 927

Contents Methods of examination. Cardiac measurements. Normal cardiac contours. Normal variations in the heart. Left ventricle. Right ventricle. Left auricle. Right auricle General cardiac enlargement. Aorta. Venae cavae and brachiocephalic vessels. Lungs in heart disease. Pericardium. Congenital heart disease. Cardiac displacement. Cardiac and extracardiac calcification. Index.

Note: As indicated in the title the outstanding feature of this important work is the large collection of roentgenograms. Based on an analysis of over 30,000 fluoroscopic and roentgenographic examinations, the volume outlines the methods of roentgenology as applied to cardiology and provides the physician with practical aid in his clinical diagnosis of heart disease. The textual material is closely integrated with the numerous illustrations, and most plates carry explanatory paragraphs. Selective bibliographies are given at the end of each chapter.

SNOW, WILLIAM

Principles in roentgen study of the chest. Springfield, Ill. Charles C Thomas 1946. 414 p. illus. 26 cm. $10 50 928

Contents (abridged) The average lung. The role of the bronchial tree. Lobar pneumonia. Broncho-pneumonia. Bronchitis. Fetal lung disease. Staphylococcus sepsis. Tuberculosis. Neoplasms of the chest. Chest injury The diaphragm. Mediastinitis. Pulmonary allergy Post-operative atelectasis. Pneumoconiosis. Infection with higher organisms. Special chest problems in children. Circulatory system. Bibliography Index.

Note: A well-organized and clearly written treatise. The author emphasizes the importance of correlating knowledge of physiology and pathology with the information available from the patient's history and physical symptoms in interpreting chest roentgenograms. *His chapter on the role of the bronchial tree reviews basic functions* and important symptoms, and the chapter on the thoracic cage interprets bone abnormalities and diseases that are sometimes detected on chest roentgenograms. More than 800 roentgenograms are reproduced and interpreted.

YEAR BOOK OF RADIOLOGY

The 1948 Year book of radiology Diagnosis, edited by Fred Jenner Hodges associate editor John Floyd Holt. Therapeutics, edited by Ira I. Kaplan associate editor Sidney Rubenfeld. Chicago Year Book Publishers, Inc. 1948 472 p. illus. 24 cm. (The practical medicine year books) $6.50 929

Contents (abridged) Part I, Radiologic diagnosis: The head. The spine and extremities The chest. The gastrointestinal tract. The genitourinary tract. Part II, Radiotherapeutics: Radiation biology Radiation physics. Radiation in general medicine. Radiation in neurology Radiation in ophthalmology Radiation in dermatology Radiation in otolaryngology Radiation in gastrointestinal conditions Radiation in gynecology Radiation in genitourinary conditions. Radiation in bone conditions. Radiation injuries and trauma. Index. Index to authors.

Note. (2204) Similar in scope and organization to the other books in this series of annuals, this one presents in the form of abstracts the advances and new findings reported in the international literature of the preceding year. Each abstract is long enough to give the gist of the original article. In each instance reference is given to the publication of the original. Some of the abstracts are supplemented by brief notes written by the editor in which the findings reported in the article are evaluated and are sometimes related to the work of other authors in the same area. As befits the subject, an exceptional number of illustrations is included in this particular annual The issue at hand contains 191.

YOUNG BARTON ROGERS

The skull sinuses & mastoids a handbook of roentgen diagnosis. Chicago The Year Book Publishers, Inc. 1948 328 p. illus 21 cm. $6 50 930

Contents (abridged) Part I, The skull Normal adult skull. Normal skull in infancy and childhood. Congenital diseases. Fractures. Conditions involving the skull. Tumors. Deformities of sella turcica. Intracranial tumors. Brain abscess; tuberculoma, cysticercosis; echinococcosis Multiple brain calcifications. Part II, The nasal sinuses: Roentgen diagnostic procedure. Normal adult sinuses; developmental variations. Normal sinuses in infancy and childhood. Maxillary sinus disease. Frontal sinus disease. Sphenoid sinus disease. Part III, The mastoids: Roentgen diagnostic procedure. Normal variations. Normal temporal bone in infancy and childhood. Mastoiditis. Paget's disease. Benign and malignant tumors Bibliography Index.

Note Essentially compilation of plates depicting the roentgen appearances of normal and diseased skulls, sinuses, and mastoids. Facing each plate is discussion of the particular features to be observed in the roentgenogram of each normal or abnormal condition. Most of the illustrative material is from the files of Department of Radiology of Temple University where the author is Professor of Radiology Descriptions of techniques and positions of the head for obtaining best results are also given. A five-page bibliography is included.

DISEASES GENERAL

BAUER JULIUS

Constitution and disease, applied constitutional pathology Second edition, revised and enlarged. New York Grune & Stratton 1947 247 p 22 cm. $4.50 931

Contents Introduction. Constitutional pathology and its general significance. Constitutional biologic inferiority of organs and tissues. The integrative systems of individual constitution—I. The integrative systems of individual constitution—II. Classification of normal and abnormal constitution. Some major diseases with chiefly constitutional etiology. Principles of treatment, nonspecific therapy pitfalls. Bibliography. Index.

Note (2118) A somewhat militant expression of the view that the proper approach in medicine is to consider the patient's whole personality rather than to concentrate attention only on the organ that appears to be the seat of his disease, a view that is more in accord with European than with American medical tradition. The literature that supports this thesis is summarized and the text is keyed to the citations of the original articles. In this revised edition an index has been provided, a few parts of the text have been rewritten or expanded, and the bibliography has been extended.

BURNET FRANK MACFARLANE

Virus as organism evolutionary and ecological aspects of some human virus diseases. Cambridge, Mass. Harvard University Press 1945 134 p 22 cm (Harvard University monographs in medicine and public health) $2 00 932

Contents Reproduction, variation and survival. Evolution and change in virus diseases. The reaction of the host to virus infection. Herpes simplex. Poliomyelitis. Psittacosis and related infections. Smallpox, alastrim, and vaccinia. Yellow fever. Influenza. Conclusion. Bibliography.

Note This brief description, from the biological point of view of the characteristics and epidemiology of some of the more common virus diseases of man, is based on the author's thesis that "viruses are microorganisms which have evolved by parasitic degeneration from larger micro-organisms." Although the book deals primarily with the diseases themselves, the author also discusses the reproduction, variation, survival, and evolution of viruses as a biological group. A seven-page bibliography is included.

DOWLING HARRY F

The acute bacterial diseases their diagnosis and treatment, with the collaboration of Lewis K. Sweet and Harold L. Hirsh. Philadelphia W B Saunders Company 1948 465 p. illus. (part col d) 24 cm. $6 50 933

Contents (abridged) Part I. Diagnosis and treatment of acute bacterial diseases: Diagnosis of the acute bacterial diseases. General measures in the treatment of infectious diseases. Serum therapy. Sulfonamide therapy. Penicillin therapy. Streptomycin therapy. Part II. Diseases caused by cocci: Pneumococcic infections. Streptococcic infections. Streptococcic infections—infections with nonhemolytic streptococci (alpha and gamma streptococci). Staphylococcic infections. Meningococcic infections. Gonococcic infections. Part III. Diseases caused by bacilli: Eberthella infections (typhoid fever). Salmonella infections. Shigella infections (bacillary dysentery). Brucellosis (undulant fever). The acute forms of tuberculosis. Pertussis (whooping cough) by Lewis K. Sweet. Hemophilus influenzae infections. Klebsiella pneumoniae (Friedländer's bacillus) infections. Tularemia and plague. Anthrax. Part IV. Bacterial diseases in which exotoxins are a major factor: Diphtheria. Tetanus. Gas gangrene. Miscellaneous bacterial diseases. Appendix: Determination of sulfonamide in blood and urine. Penicillin assay. Streptomycin assay. Index.

Note A practical guide for advanced medical students and practicing physicians. Two features are particularly valuable—diseases are identified and grouped according to their etiological agents, and full account is taken of the new antibiotic and other chemotherapeutic agents. The book is arranged to facilitate rapid diagnosis. The discussion of individual diseases summarizes, in each instance, the modern knowledge and techniques of diagnosis, prognosis, treatment, and prevention. Symptoms, signs and other clinical characteristics are described, differential diagnosis is discussed, then laboratory tests and treatment are covered concisely but adequately. Extensive lists of related literature accompany the chapters.

HAGAN WILLIAM ARTHUR, AND OTHERS

The relation of diseases in the lower animals to human welfare. New York The New York Academy of Sciences 1947 226 p illus. 24 cm. (New York Academy of Sciences. Annals Vol. 48 p 351–576 1947) Paper $2.50 934

Contents: Introduction to the conference, by W A. Hagan. Rabies, by H. N Johnson. Equine encephalomyelitis, by K. A. Kelser. Psittacosis, ornithosis, and related viruses, by H. R. Cox. The relation of brucellosis to human welfare, by I. F Huddleson. The prevention of plague in the light of newer knowledge, by K. F Meyer. Animal tuberculosis and its relation to the disease in man, by W H. Feldman. Anthrax in animals and its relationship to the disease in man, by C. D Stein. Erysipelothrix rhusiopathiae infection in swine and in human beings, by J V Klauder. Animal parasites transmissible to man, by W H. Wright.

Note The papers comprising this volume are the work of prominent veterinarians, public health workers, bacteriologists, and pathologists. Various animal diseases which are transmissible to man are discussed on the basis of etiology, diagnosis, susceptibility, treatment, and control. Particular attention is given to a critical appraisal of existing preventive measures. Formal bibliographies or foot-note references are included in each paper. There is no index.

HANDBOOK OF MEDICAL EMERGENCIES Cambridge, Mass. Harvard University Press 1947 106 p 17 cm. $2 50 935

Contents: Penicillin therapy. Streptomycin therapy. Sulfonamide therapy. Infectious diseases. Diseases of allergy. Intoxications. Diseases due to physical agents. Diseases of the digestive system. Diseases of the kidney. Diseases of the cardiovascular system. Neuropsychiatric diseases. Diseases of the respiratory system. Diseases of the endocrine system. Diseases of the eye. Diseases of the blood. Parenteral therapy. Miscellaneous tables. Abbreviations. Index.

Note: A pocket-sized handbook prepared originally by a group of Harvard medical students and intended for the guidance of interns in dealing with medical—in contrast to surgical—emergencies. It tabulates in brief and succinct form, methods of diagnosis and treatment for more than 75 diseases, ranging from snake bite and electric shock to meningitis and angina pectoris. Useful tables of metric equivalents and values for blood, urine, and spinal fluid constituents are included.

HULL THOMAS GORDON

Diseases transmitted from animals to man. Third edition. Springfield Ill. Charles C Thomas 1947 571 p illus. 24 cm. $11.00 936

Contents Section One, Diseases of domestic animals and birds: Tuberculosis, by W H. Feldman. Anthrax, by H. F Smyth. Brucellosis, by I F Huddleson. Glanders, by C. D McGilvray. Swine erysipelas, by J. V Klauder. Salmonella food infections. Listerellosis, by R. Graham. Rabies, by K. A. Kelser. Ornithosis (psittacosis). Foot-and-mouth disease. The pox diseases of man and animals, by W A. Hagan. Milker's nodules, by W A. Hagan. Contagious ecthyma of sheep. Arthropod-borne encephalitides. Rift Valley fever. Milk sickness. Infections produced by animal parasites, by E. C. Faust. Fungous diseases, by F D Weidman. Section Two, Diseases of rodents and wild animals: Plague, by K. F Meyer. Tularemia. Leptospirosis. Rat-bite fever. Haverhill fever. Endemic relapsing fever. Typhus fever by R. E. Dyer. Rocky Mountain spotted fever by R. E. Dyer. Tsutsugamushi disease. Q fever. Jungle yellow fever by F L. Soper. Lymphocytic choriomeningitis, by C. Armstrong. Section Three, Human diseases spread by animals: The relation of human infections to animals. Septic sore throat. Scarlet fever. Diphtheria. Section Four, Animals as passive carriers of disease organisms: Botulism. Tetanus. Gas gangrene. Section Five, A review of the role played by each animal in the spread of disease. The role of different animals and birds in diseases transmitted to man.

Note (2129) A standard manual which is of interest to medical practitioners, public health officers, medical research workers, and veterinarians. Information is included on identification, history, prevalence, etiology, prevention, and control. Important points are summarized at the end of each chapter and references are furnished to the more important literature. In this edition seven new chapters have been added and the older chapters have been revised.

MOULTON FOREST RAY editor

Rickettsial diseases of man. A symposium on the rickettsial diseases of man, organized by the Section on Medical Sciences of the A.A.A.S. and presented at the Boston meet

ing on December 26–28 1946 Organized by Malcolm H Soule secretary of the Section on the Medical Sciences. Washington American Association for the Advancement of Science, 1948 247 p illus. 26 cm. $6.25 937

Contents: Epidemic typhus in the Mediterranean area during World War II, by S. Bayne-Jones. Louse-borne typhus fever in the European theater of operations, U S. Army 1945, by J E. Gordon. Epidemic typhus fever in Japan and Korea, by A. B. Scoville, Jr. Scrub typhus (tsutsugamushi disease) in the U S. Army during World War II, by K. F Maxcy Outbreaks of Q fever during World War II, by J. H. Dingle. Biology of the rickettsiae by D. Greiff. The classification of rickettsiae and rickettsial diseases, by H. Pinkerton. Laboratory procedures for the isolation and identification of the pathogenic rickettsiae, by H. Pinkerton. Vectors of rickettsial diseases, by G. M. Kohls The reservoirs of infection in rickettsial diseases of man, by C. B. Philip. Rickettsialpox—general considerations of a newly recognized rickettsial disease, by R. J. Huebner. The pathology of the rickettsial diseases of man by S B. Wolbach. The symptomatology clinical course, and management of louse-borne typhus fever by A. Yeomans. Endemic (murine) typhus fever: symptomatology by T E. Woodward. Symptomatology and certain other aspects of Rocky Mountain spotted fever by R. R. Parker. The symptomatology of tsutsugamushi disease by F G. Blake. Q fever clinical features, by F C. Robbins. The treatment of the rickettsial diseases of man, by J. C. Snyder The serological reactions in the rickettsial diseases of man, by C. J D. Zarafonetis. The Weil-Felix reaction, by E. Wertman. Complement fixation and agglutination reactions in rickettsial diseases, by J E. Smadel. The soluble substances of the rickettsiae, by H. Plotz. The preparation and standardization of rickettsial vaccines, by H. R. Cox. DDT and other insecticides for the control of lice and fleas attacking man, by E. F Knipling. Methods of application of DDT by D. M. Gressley The control of murine typhus in the United States, by G. H. Bradley and J. S. Wiley Miticides and mite control, by R. C. Bushland.

Note: Much of the material in this collection, particularly that relating to control measures and the use of insecticides, is based on experience gained by the armed forces in Europe and other battle fronts during World War II. Each paper has been prepared by an expert in the fields of entomology biology or medicine, and in most cases an extensive bibliography is included. The work is addressed to persons trained in medicine and public health.

RIVERS THOMAS MILTON editor

Viral and rickettsial infections of man. 77 illustrations including 6 plates in color Philadelphia J B Lippincott Company 1948 587 p illus. (part col'd) 26 cm. $5.00 938

Contents: General aspects of viral and rickettsial infections, by T M. Rivers. Physical and chemical procedures, by W M. Stanley and M. A. Lauffer. Serologic reactions in viral and rickettsial infections, by J E. Smadel. Chick-embryo technics, by E. W Goodpasture and G. John Buddingh. Propagation of viruses and rickettsiae in tissue cultures, by J F Enders. Epidemiology by K. F Maxcy Bacterial viruses—bacteriophages, by A. D. Hershey and J Bronfenbrenner Viral encephalitides, by P K. Olitsky and J. Casals. Rabies, by H. N Johnson. Poliomyelitis, by H. A Howe. Infectious hepatitis and serum hepatitis, by W Paul Havens, Jr and J R. Paul. Common cold—Primary atypical pneumonia—Influenza, by F L. Horsfall, Jr. Smallpox and vaccinia, by J E. Smadel. Psittacosis-lymphogranuloma group, by K. F Meyer. Trachoma and inclusion conjunctivitis, by P Thygeson. Measles—Rubella—Exanthem subitum, by G. Rake. Diseases caused by the virus of herpes simplex, by T F McNair Scott. Epidemic keratoconjunctivitis, by T M. Rivers. Varicella-herpes zoster group, by J Stokes, Jr. Mumps, by J F Enders. Infectious mononucleosis, by T M. Rivers. Pretibial fever by A. B. Sabin. Colorado tick fever by H. R. Cox. Yellow fever—Rift Valley fever by M. Theiler Dengue—Phlebotomus fever by A. B. Sabin. The typhus fevers, by J. C. Snyder The spotted fever group by H. R. Cox Scrub typhus—Q fever by J E. Smadel. Infections of minor importance, by T M. Rivers. Encephalomyocarditis, by J Warren. Bibliographic index. Subject index.

Note: A comprehensive presentation of basic information. It is suitable primarily for non-specialists, particularly medical students, general medical practitioners, and public health officers. Publication was subsidized by the National Foundation for Infantile Paralysis in order to make possible the relatively low price. Each paper is accompanied by an extensive bibliography and the names of authors of the cited literature are indexed, thus making it easy to trace specific original contributions.

STIMSON, PHILIP MOEN

A manual of the common contagious diseases. Fourth edition thoroughly revised with 67 illustrations and 8 plates 6 in color Philadelphia Lea & Febiger 1947 503 p. illus. (part col d) 20 cm. $4 00 939

Contents. Principles of contagion. Serum reactions The sulfonamides and the antibiotics—their use in the common contagious diseases. Diphtheria. Vincent's angina. Scarlet fever. Measles. Rubella. Whooping cough. Mumps. Chickenpox. Smallpox. Vaccination against smallpox. Meningococcus meningitis. Poliomyelitis. General management of contagious diseases. Glossary Index.

Note: (2215) A compendium of clinical information which is especially useful to general practitioners, public health officers, school physicians, nurses, and others whose professional work requires knowledge of children's and other contagious diseases. Although designed as a compact manual, a good deal of information is included. The typical discussion of a disease covers the following points: synonyms, definition, etiology epidemiology pathology immunity, incubation period, clinical manifestations, complications, diagnosis and differential diagnosis, mortality and prognosis, period of infectivity isolation and quarantine, prophylaxis, and treatment, and in addition, there is a bibliography of selected references to pertinent literature. In the present edition the chapter on the sulfonamides and the antibiotics is new and the section on poliomyelitis has been completely rewritten in view of knowledge gained since the preparation of the third edition and experience with the Kenny method of treatment. Other small changes are found in many places throughout the text.

TOP FRANKLIN HENRY AND COLLABORATORS

Communicable diseases With 95 text illustrations and 13 color plates. Second edition. St. Louis C. V Mosby Company 1947 992 p. illus. (part col d) 22 cm. $9.50 940

Contents (abridged) Section I, General considerations applicable to communicable diseases: Infection and immunity Regulations governing control of communicable diseases. Specific prevention of certain communicable diseases. Management of communicable diseases in hospital, by P L. Clarke. Section II, Communicable and infectious diseases classified by common portal of entry: A. The respiratory tract—Coccidioidomycosis, by C. E. Smith. Erysipelas. Meningitis. Pneumococcic pneumonia, by G. B Myers. Rheumatic fever by D. D. Rutstein. Tuberculosis, by B. H. Douglas. The common cold. Encephalitis. Influenza, by J. E. Salk, Measles. Acute anterior poliomyelitis. Psittacosis. B. The gastrointestinal tract—Amebic dysentery Epidemic diarrhea of the newborn, by G. D Cummings Food poisoning. Infectious hepatitis, by T Francis, Jr Typhoid fever Undulant fever. C. The mucous membranes or skin—Chancroid, by L. W Shafer Gonorrhea, by G. Sewall. Syphilis, by L. W Shafer Trachoma, by P Heath. Impetigo. Granuloma inguinale, by L. W Shafer. Ringworm of the scalp, by J G. Molner and L. W Shafer Hookworm disease. Tetanus. Tularemia. Malaria, by L. T Coggeshall. Rickettsial diseases, by J C. Snyder. Section III Appendix. Glossary Index

Note: A compact reference book which is not *encyclopedic* but in which most diseases of interest to the average general practitioner are adequately covered. The second section accounts for most of the book's length. In it individual diseases are arranged according to the most common portal of entry and each is discussed in the pattern of definition, history infectious agent, epidemiology immunity pathology symptoms, complications, diagnosis, prognosis, treatment, and prevention. The discussions are somewhat fuller than in the average text book. Extensive changes which include the rewriting of three chapters, the enlargement or revision of many others, and the addition of fourteen new ones have been made in the work in this edition.

HEMATOLOGY

DAMESHEK WILLIAM *editor in-chief*

Morphologic hematology New York Grune & Stratton, 1947 200 p illus. 26 cm. (Blood, the journal of hematology Special issue no 1) $4 75 941

Contents: The histopathology of lesions in the bone marrow of patients having active brucellosis, by R. D. Sundberg and W. Spink.

In vitro study of bone marrow I, A method for marrow culture—II, Studies of erythropoiesis, by C. M. Plum. Normal bone marrow as obtained by sternal puncture, by S. L. Vaughan and F Brockmyre. Hemograms and myelograms of the healthy female mice of C 57 Brown and CFW strains, by K. M. Endicott and H. Gump. Cytomorphological observations in Hodgkin's disease, by J Furtado-Bower A physiological study of erythroblasts in the duck, by H. H. Rostorfer and R. H. Rigdon. A method for the separation of leukocytes from whole blood by flotation on serum albumin by B. L. Vallee, W L. Hughes, Jr and J G. Gibson. The preparation of morphologically intact leukocytes from peripheral blood by means of gramicidin and lysolecithin, by T P Burger I. Silberbach, and S. Schwartz Comparative studies of phagocytosis in normal and in anemic blood, by L. J Berry R. M. Leyendecker and T D. Spies. The influence of anemia on phagocytic functions in rats, by L. J Berry and E. C. Haller The influence of anemia on phagocytic functions and resistance to infection in mice, by L. J Berry and E. C. Haller Certain characteristics of the leukocytes of guinea pig blood with particular reference to the Kurloff body by E. Smith. Studies on the adhesion of human blood platelets and bacteria, by R. B. Houlihan. The adhesion of dog platelets to bacteria, by R. B Houlihan. Studies on platelets: The effect of platelets on the surface tension of saline solutions and heparinized plasma, by A. L. Copley and D F Glass—VI, The isolation of platelets from human and dog blood—VII, The agglutination of platelets isolated from human, dog and swine blood, by A. L. Copley and R. B Houlihan. Index.

Note: A collection of papers prepared by scientists and research workers associated with some of the leading medical schools in the United States Each paper is based on investigations carried out by the writer Bibliographies or lists of references are given at the end of each paper and general index has been provided.

HILL JOSEPH MACGLASHAN AND WILLIAM DAMESHEK editors

The Rh factor in the clinic and the laboratory New York Grune & Stratton 1948 192 p illus 26 cm. (Blood the journal of hematology Special issue no 2) $4.25 942

Contents Preface, by W Dameshek. A survey of the significance of the Rh factor by Philip Levine. The Rh genotypes and Fisher's theory by R. R. Race. Hemolytic mechanisms, by W Dameshek. Generalities on the cellular content of some blood cells, by I. González Guzmán Interrelationship between the Rh system and the A B system by E. Witebsky Hemolytic Rh immune globulins; evidence for possible third order of antibodies incapable of agglutination or blocking, by J M. Hill, S. Haberman, and F Jones Acute renal insufficiency due to incompatible transfusion and other causes, with particular emphasis on management, by E E. Muirhead and others. Rh antibodies correlation with clinical findings, by I Davidsohn. On certain variations in erythroblastosis fetalis, by B. Chown. The A and B factors as possible causes of erythroblastosis, by A. C. Vélez Orozco The treatment of erythroblastosis fetalis by substitution transfusion, by H. Wallerstein Current problems regarding the Rh factor Historical review of Mexican blood transfusion by F. Uribe Guerola Index.

Note. The papers comprising this volume were presented at the International Hematology and Rh Conference held in Dallas, Texas in 1946 They provide summarized account of recent investigations and findings in this particular phase of hematological research, as presented by some of the outstanding authorities in the field The majority of the papers contain short bibliographies, and comprehensive index is included.

JOSIAH MACY JR. FOUNDATION

Blood clotting and allied problems. Transactions first conference Feb 16–17 1948 New York, N Y Edited by J E. Flynn. New York Josiah Macy Jr Foundation, 1948 179 p illus 23 cm Paper $3 25 943

Contents. Blood clotting and hemostasis, by L. B Jaques. The known and the unknown, by C. H. Best. Fibrinolytic enzymes, by T Astrup. Report of the committee about terminology for the proteolytic enzymes of plasma. Inhibitors and accelerators factors in thrombosis, by K. M Brinkhous. Some unsolved problems in the chemistry of blood clotting, by J T Edsall. Protein equilibrium reactions in the blood clotting mechanism, by W H Seegers and A G Ware. Value of prothrombin determinations, by I S. Wright. Dicoumarol and the estimation of prothrombin, by K. P Link Appendix Prothrombin determination techniques as done in various laboratories. Two stage prothrombin determination, by W H. Seegers. Determination of prothrombin in plasma and plasma fractions, by J. T Edsall. Prothrombin determinations, by L. M. Tocantins. Technique of the quick prothrombin time as performed at the Mayo Clinic, by N W Barker Determination of prothrombin time, by L. B Jaques. The determination prothrombin, by A. J Quick. Prothrombin clotting time determination, by C. C. Rumbel. Method for the determination of prothrombin clotting time, by R. S. Overman.

Note As in other conferences sponsored by the Foundation, the object is symposium among experts on the problems investigated and some of the results of recent research. The papers are informal, short, and are here printed with reports of the discussion at the Conference.

KRACKE, ROY RACHFORD

Color atlas of hematology with brief clinical descriptions of various diseases for medical students laboratory technicians and general practitioners of medicine with clinical and hematologic descriptions of blood diseases including a section on terminology a section on technic and a summary of blood findings in various diseases Illustrated with 32 plates in full color and 3 plates in black and white. Philadelphia J B Lippincott Company 1947 204 p 24 cm. $5.00 944

Contents: Definitions of hematologic terms. Origin and development of blood cells. Morphology of blood cells. Myeloblasts and myelocytes. Lymphocytes and monocytes. The red cells. Normal blood. Leukocytosis (neutrocytosis, lymphocytosis, monocytosis, eosinophilia) The leukopenic diseases. The iron-deficiency anemias. The hemolytic anemias. Anemias of marrow damage. The macrocytic anemias. The leukemias. The hemorrhagic diseases Infectious mononucleosis. The bone marrow Blood parasites. Miscellaneous diseases of the blood and the blood forming organs. Splenomegaly and splenectomy Blood pictures in various laboratory animals. Hematologic technic. Summary of hematologic findings. Index.

Note The outstanding feature of this manual is the series of color plates which depict the characteristics of the blood in various diseases, and with which the general practitioner, laboratory technician or medical student may compare his own findings. The book also includes summarized description of the pathology diagnosis and treatment of blood diseases and an outline of the tests used for conducting blood analyses. The author is Dean and Professor of Clinical Medicine of the Medical College of Alabama.

PONDER ERIC

Hemolysis and related phenomena. With 69 illustrations. New York Grune & Stratton 1948 398 p illus 23 cm. $10.00 945

Contents Introduction. Shape changes unaccompanied by volume changes. Shape changes accompanied by volume changes. Cytochemistry and architecture. The kinetics of hemolysis Inhibition and acceleration of hemolysis. Hemolysis in vivo. Appendices. The red cells of the Camelidae. Hemolysis and related phenomena observed in isolated red cells. Red cell counting Red cell metabolism. References Author index. Subject index.

Note An exhaustive account of the present status of knowledge of the red blood cell and the hemolytic processes in mammals. Following the chapters on the shape changes, the cytochemistry and the architecture of the erythrocyte, hemolysis is explained from the viewpoint of kinetics and discussed in connection with phenomena preceding, accompanying, and following the lysis. A major part of the text is devoted to the description and analysis of measuring methods and tabulation of data. Addressing himself primarily to specialists in the field, the author supplies critical evaluation of methods and results in each of the problems discussed, stressing the inadequacy of present solutions and the need for further investigations. The bibliography contains references to more than 600 articles. The work supersedes the author's *The mammalian red cell and the properties of hemolytic systems*, Berlin, 1934.

PONDER, ERIC AND OTHERS

Some aspects of red cell production and destruction New York The New York Academy of Sciences 1947 128 p. illus 24 cm.

(New York Academy of Sciences. Annals. Vol. 48 p. 577–704 1947) Paper $2.00 946

Contents: Red cell cytochemistry and architecture, by E. Ponder. The endocrine system and hemopoiesis, by A. S. Gordon and H. A. Charipper. Hemoglobin and red cell production in experimental hemorrhage anemia, by F S. Robscheit-Robbins. Iron and porphyrin metabolism in relation to the red blood cell, by S. Granick. Etiologic considerations in macrocytic anemias, by W B. Castle. Hemolytic mechanisms, by W Dameshek.

Note: A collection of papers presented at a conference held in April, 1946 under the auspices of the New York Academy of Sciences. Each paper has been prepared by an authority in the field of hematology. Together the papers provide a review of recent studies regarding the formation and destruction of red blood cells. The results of experiments and various hypotheses are critically evaluated and lines of future research indicated. Bibliographies are included.

POTTER, EDITH LOUISE

Rh—its relation to congenital hemolytic disease & to intragroup transfusion reactions. Chicago The Year Book Publishers, 1947 344 p illus 21 cm. $6 00 947

Contents (abridged): The Rh factor—general survey. Discovery of Rh. The Rh antigens and antibodies. Rh and transfusion reactions. Hemolytic disease. Relation of Rh to hemolytic disease. General classification of fetuses and infants with hemolytic disease. Clinical diagnosis and course of infants with hemolytic disease. Differential diagnosis. Complications and sequelae. Prevention. Treatment. Bibliography. Index.

Note: A review of present-day knowledge regarding the Rh factor and its relation to congenital hemolytic disease in fetus and newly-born infant. The book is based upon a survey of the literature of the subject, and upon studies carried on at the Chicago Lying-in Hospital. The history of the discovery of the Rh factor and its properties are discussed, but the greater part of the book deals with the causes, diagnosis, prevention, and treatment of hemolytic disease. A thirty-nine page bibliography is included.

SEEGERS, WALTER HALTER, AND ELWOOD A. SHARP

Hemostatic agents with particular reference to thrombin, fibrinogen and absorbable cellulose. Springfield Ill. Charles C Thomas, 1948 131 p. illus. (part col'd) 23 cm. $4 75 948

Contents: Clotting of the blood. Mechanics of topical hemostasis with thrombin. Thrombin. Fibrinogen. Oxidized cellulose. Fibrin foam and gelatin sponge. References. Index.

Note: A brief but useful evaluation from the viewpoint of practical clinical medicine of some recent developments and discoveries regarding the chemistry of blood clotting and hemorrhage control. The book is based on a survey of literature of the subject and deals primarily with the properties, methods of preparation, and clinical use of various hemostatic agents. The references, cited throughout the text, are keyed to a twenty-five page bibliography, which includes mainly literature published in the period 1914–1944.

SHWARTZMAN GREGORY AND OTHERS

Hemorrhage. New York The New York Academy of Sciences, 1948 178 p illus. 24 cm. (New York Academy of Sciences Annals. Vol. 49 p. 483–660 1948) Paper $3.00 949

Contents: Introductory remarks, by G. Shwartzman. A review of some basic facts of blood coagulation, by J H. Ferguson. Heparin in blood clotting and thrombosis, by C. H. Best and L. B. Jaques. The relationship of Vitamin K to hemorrhage and coagulation, by S. A. Thayer. Hemorrhagic manifestations observed in experimental deficiency of pantothenic acid, choline, and cystine, by P György. The effects of hemorrhage on the circulation, by D. W Richards, Jr. Experimental studies on traumatic and hemorrhagic shock, by M. I. Gregersen. Vasomotion in the hemodynamics of the blood capillary circulation, by R. Chambers. Reactions of peripheral blood vessels in experimental hemorrhage, by B. W Zweifach and others. Hepato-renal factors in circulatory homeostasis: III. The influence of humoral factors of hepato-renal origin on the vascular reactions to hemorrhage, by E. Shorr and others. Effects of hemorrhage on the kidney by D D Van Slyke. Metabolic changes associated with hemorrhage, by A. E. Wilhelmi and C. N H. Long. Certain anatomo-pathologic aspects of hemorrhage, by P Klemperer. Hemorrhagic manifestations of bacterial and virus infections: experimental studies and pathological interpretations, by G. Shwartzman and I. E. Gerber. Abnormal hemorrhage with normal platelet count and normal clotting, by R. L. Haden and others. Clinical aspects of hypoprothrombinemia, by C. S. Davidson and H. J Tagnon.

Note: The papers comprising this volume were prepared by medical authorities and research workers in the field of hematology and were first presented at a conference sponsored by the New York Academy of Sciences. Based on the original investigations of the authors, and in some cases on a survey of literature of the subject, they provide a review of current knowledge and some new information regarding various aspects of the mechanism and physiology of blood coagulation and hemorrhage. Most of the papers include brief bibliographies. There is no index.

STURGIS CYRUS CRESSEY

Hematology Springfield, Ill. Charles C Thomas, 1948 915 p. illus. (part col d) 26 cm. $12.50 950

Contents (abridged): Classification and general remarks concerning the anemias. Simple chronic anemia. Iron deficiency anemia. Anemias of pregnancy. The hemolytic anemias. Pernicious anemia and other macrocytic anemias. Chronic congestive splenomegaly (Banti's syndrome). Refractory anemias. Sickle cell anemia. Elliptocytosis. Mediterranean anemia. Erythroblastosis fetalis. Hemorrhagic states. Changes in leukocytes. The leukemias. Malignant lymphomas. Infectious mononucleosis. Agranulocytosis. Polycythemia. The lipoidoses. Sternal puncture. Blood transfusions and blood substitutes. Alphabetical bibliography. Index.

Note: A concentrated, well-organized text and reference book on pathological conditions of the blood and related topics. About half of the space is devoted to the various anemias. Synonyms, definitions, history, etiology, symptoms and signs, laboratory problems, treatment, and prognosis are covered under each topic. The work is especially notable for its full survey of literature. The bibliographical apparatus includes numerous references at the bottom of text pages, which are reorganized into a 50-page bibliography at the end of the book. In summarizing the contributions of others, the author often interjects helpful criticism of his own.

WHITE CHARLES STANLEY, AND JACOB JOSEPH WEINSTEIN

Blood derivatives and substitutes preparation storage, administration and clinical results including a discussion of shock, etiology physiology pathology and management. Baltimore The Williams & Wilkins Company 1947 484 p illus. 23 cm. $7.50 951

Contents: History. Chemistry and physiology of plasma. Preparation of liquid citrated plasma. Storage of plasma. Dried plasma—preparation, storage and use. Administration. Plasma fractionation and fractions. By-products of plasma preparation. Plasma substitutes. Human blood serum. Blood preservation, transportation, and the universal donor. Blood plasma bank. Shock. Clinical results with human plasma. Reactions with plasma. Index.

Note: A comprehensive manual of the preparation, storage, and administration of blood plasma and blood plasma substitutes. The history of blood transfusion is sketched in the first chapter but the remainder of the book is written chiefly from the clinical viewpoint and is intended as a reference tool and practical guide for laboratory technicians, medical students, medical practitioners, and surgeons. Proven techniques are described in considerable detail. The authors have surveyed the literature and cite it in extensive lists appended to the chapters. They have incorporated also the results of their own pioneer investigations into the storage and use of blood plasma.

WINTROBE, MAXWELL MYER

Clinical hematology Second edition, thoroughly revised. Illustrated with 197 engravings and 14 plates, 10 in color Philadelphia Lea & Febiger 1946 862 p illus. (part col'd) 24 cm. $11 00 952

Contents: The origin and development of the cells of the blood in the embryo, infant and adult. The erythrocyte. Leukocytes.

Blood platelets and coagulation. The blood as a whole. The principles and technic of blood examination. Anemia—general considerations and treatment. Pernicious anemia and related macrocytic anemias. The normocytic anemias. Hypochromic microcytic (iron deficiency) anemia. Anemia in infancy and childhood. Polycythemia. The purpuras. Hemophilia and other hemorrhagic disorders. Leukemia. Tumors and tumor-like conditions involving the blood-forming organs. Agranulocytosis and infectious mononucleosis. Appendices. Index.

Note (2231) A comprehensive work based on the literature of the subject, written to meet the needs of the general practitioner. Emphasis is placed on the importance of accurate diagnosis, and laboratory procedures which may be carried out in the office of the average physician are considered in detail. The extensive revisions and additions made in this edition account for more than 150 additional pages. A new chapter on the metabolism of the erythrocyte has been added, and such topics as the synthesis and use of folic acid, the role of vitamins in hematopoiesis and the Rh factor are now discussed. In addition, the extensive bibliographies given at the end of each chapter have been brought up to date.

CARDIOVASCULAR AND RENAL DISEASES

Addis Thomas

Glomerular nephritis diagnosis and treatment. New York The Macmillan Company 1948 338 p illus. 24 cm. $8.00 953

Contents Special clinical laboratory methods for the physical examination of patients with renal disease. Special clinical dietetic methods. Inferences as to the nature of the renal lesion. Inferences as to the extent of the renal lesion. The theory of the differentiation of glomerular nephritis from other diseases. The differentiation of glomerular nephritis from other diseases. Glomerular nephritis. Theory and practice in the treatment of glomerular nephritis. Appendix. References. Index.

Note This book is based on the author's own extensive experience in the treatment of renal disease. Furthermore, the author contends that accepted present-day methods of treatment are inadequate. The main point of his theory is that rest, supplemented by an adequate diet which does not impose an unnecessary burden on the kidneys, is essential. After a preliminary section which deals with laboratory and clinical observation, the book is devoted to discussions of practical clinical application of the author's method. The methods and work of other authors are not discussed in the text but are referred to in the bibliography

Allen, Edgar Van Nuys, and others

Peripheral vascular diseases by Edgar V Allen Nelson W Barker and Edgar A. Hines Jr with associates in the Mayo Clinic and Mayo Foundation. 386 illustrations, 7 in color Philadelphia W B Saunders Company 1946 871 p illus (part col'd) 24 cm. $12 00 954

Contents (*abridged*) Gross and microscopic anatomy of peripheral blood vessels, by Walter F Kvale. An approach to the diagnosis of vascular diseases of the extremities. Nailfold capillaries in man by O M. Roth. Clinical tests and physiologic significance of secretion of sweat in man, by O M. Roth. Raynaud's disease. Scleroderma (acrosclerodermia—acrosclerosis—diffuse scleroderma) Diseases which primarily are effects of environmental temperature on the vascular system. The scalenus anticus syndrome with and without cervical rib, by J. G. Love. Sudden occlusion of the arteries (arterial embolism and acute arterial thrombosis) Arteriosclerosis and arteriosclerosis obliterans. Thrombo-angiitis obliterans (Buerger's disease) Aneurysms. Arteriovenous fistulas. Tumors of blood and lymph vessels. Diseases of the veins. Chronic venous insufficiency. Lymphedema. Surgical treatment for certain conditions and special technics. The medicolegal aspects of peripheral vascular diseases. Index

Note A comprehensive treatise in which is represented much pioneer work in the study of the peripheral vascular diseases, which is carried out at the Mayo Clinic and Mayo Foundation. The field of peripheral vascular disease is broadly defined to include diseases of all blood vessels distal to the heart and, also, the lymph system. However a few topics have been omitted, such as hypertension, vascular disease of the central nervous system, and certain vascular diseases of internal organs, since these discussions belong primarily to other special fields of medicine. In general the following aspects of each disease or group of related diseases is covered: history etiology pathology physiological effects, symptoms, complications, examination of the patient, diagnosis, differential diagnosis, and treatment. The chapters include long bibliographies.

Ayman David

Arterial hypertension. Edited by Henry A Christian. Reprinted from Oxford loose-leaf medicine with the same page numbers as in that work. New York Oxford University Press, 1948 265 p. illus. 24 cm. (Oxford medical publications) $2 50 955

Contents (*abridged*) Etiology Pathology Constitutional type in hypertension. Symptoms. Evolution of essential hypertension from earliest stages. Physical findings. X-ray studies. Electrocardiograms. Treatment. Drugs and methods for lowering the elevated blood pressure. Bibliography

Note A summary of current information and experience on hypertension designed primarily for the practicing physician. Heredity psychosomatic aspects, constitutional factors, and treatment are carefully considered. The author's own experience in treatment by the use of drugs, psychotherapy and sympathectomy forms an important part of the text. Frequent reference is made to the work of other authors and a bibliography of 99 items is included.

Barrow David Woolfolk

The clinical management of varicose veins. With a foreword by Arthur W Allen. New York Paul B Hoeber, Inc., Medical Book Department of Harper & Brothers 1948 155 p. illus (part col'd) 24 cm. $5 00 956

Contents Foreword by Arthur W Allen. History and anatomy Physiology and etiology Pathology Symptomatology Examination of the patient. Treatment of varicose veins by injection. Treatment of varicose veins of the long saphenous system. Treatment of varicose veins of the short saphenous system. Treatment of incompetent veins communicating between deep and superficial venous systems. Complications. Thrombophlebitis. After-care of the varicose extremity References Index.

Note. Although relatively short for a medical treatise, this book provides a detailed discussion of diagnosis, therapy and after-care of varicose veins. The author has made a specialty of the subject and has based the book on an intensive critical experience. It is not, however addressed to specialists but to medical students and general practitioners. Certain therapies which are discussed in greatest detail are those which the author and others have found to be the best. Practically no space is given to techniques of historical interest only There are fifty-eight illustrations. The bibliography contains 177 entries.

Bell, Elexious Thompson

Renal diseases. Illustrated with 115 engravings and 4 color plates. Philadelphia Lea & Febiger 1946 434 p illus. (part col'd) 24 cm. $7 00 957

Contents. Introduction—classification of renal diseases Normal histology Normal and pathological physiology Developmental anomalies. Obstruction of the urinary tract—hydronephrosis. Glomerulonephritis. Tubular diseases. Exudative interstitial nephritis (pyelonephritis) Diseases of the blood vessels. Diseases of the kidney related to metabolic disorders. Extrarenal azotemia. Tumors of the kidneys Index

Note The author of this book, who is Professor of Pathology in the University of Minnesota, believes that both pathologist and clinician are seriously handicapped in diagnosis unless they have adequate knowledge of each other's fields. In this work, he deals primarily with pathology both clinical and postmortem, but presents the subject in relation to the over all clinical picture and the data derived from laboratory tests. Some material on treatment is given but in general both for treatment and historic information the reader is referred to other authors. Besides the usual diseases of the kidneys, toxemias of pregnancy and the relation of kidney conditions to hypertension are discussed. Individual cases and statistical studies of groups of cases from the author's own experience are prominent in the text. Illustrations are predominantly reproductions of microphotographs. Bibliographical references at the end of chapters are moderately full.

BRAMS WILLIAM A.

Treatment of heart disease. Philadelphia W B Saunders Company 1948 195 p illus 23 cm. $3.50 958

Contents: The pharmacologic action of drugs used in the treatment of heart disease. The treatment of congestive heart failure. Diseases of the coronary arteries. The treatment of disturbances in cardiac rate and rhythm. Disturbances of conduction. Infectious diseases of the heart and aorta. Congenital malformations of the heart and great vessels. Diseases of the pericardium. The heart in hypertension. The heart in endocrine and metabolic disorders. Neurocirculatory asthenia. The heart in vitamin deficiency. Heart disease in pregnancy. Surgery and heart disease. Bibliography. Index.

Note. A concise guide to therapies that the author has found valuable in his own experience as specialist in heart disease. Standard drugs and techniques are discussed from the viewpoint of the physician in charge of the patient, and valuable supplementary information on rest, diet, and the treatment of complications is included. Although the author has limited the book to the drugs and techniques that he has used in his own practice, he has included well-selected bibliography of 290 references and has keyed statements in his text to it. The work is addressed primarily to the general medical practitioner.

BURCH GEORGE EDWARD, AND TRAVIS WINSOR

A primer of electrocardiography. Illustrated with 235 engravings. Philadelphia Lea & Febiger 1945 215 p. illus 24 cm. $3.50 959

Contents: Theories of electrocardiography. An analysis and the clinical significance of various portions of the electrocardiogram. Precordial leads. Disorders of the heart beat. Clinical applications of the electrocardiogram. Appendices: Triaxial reference system. Electrical axis (Dieuaide chart). The waves of the electrocardiogram—averages and ranges. P-R interval—variations. QRS—duration. S-T segment—upper limits. Q-T intervals—upper limits. Relation of cycle length to heart rate. Diagnostic electrocardiographic criteria. Index.

Note. An introduction to the subject for medical students, internes, nurses, and physicians. Photographs of electrocardiograms are not reproduced, but the volume is liberally supplied with excellent diagrams which portray, explain, and clarify electrocardiographic wave forms of representative heart conditions. Bibliographic references are not included. Reader familiarity with heart anatomy, physiology and pharmacology is assumed.

BURSTEIN JULIUS AND NATHAN BLOOM

Illustrative electrocardiography. Third edition. New York D Appleton-Century Company Incorporated, 1948 309 p illus. 24 cm. $6 00 960

Contents: Fundamentals of electrocardiography. The normal electrocardiogram and disturbances of the pacemaker. Premature contractions. Paroxysmal tachycardias. Flutter and fibrillation. Auriculoventricular block (heart block). Bundle branch block. S-T and T abnormalities—the electrocardiogram in myocardial infarction. Ventricular strain. The electrocardiogram in pericarditis. The electrocardiogram under various influences. The fourth and other precordial leads. The phonocardiogram. Multiple abnormalities. Miscellaneous group. Radiology of the heart. Index.

Note. (1236) A standard work on the subject, known to the medical profession since 1938. The present edition incorporates new chapter on cardiac radiology written by Philip Eisler and an almost entirely new set of illustrative plates. In all, several hundred cardiogram-reproductions of normal and abnormal heart conditions are included, together with twenty-three cardiac roentgenograms. The volume is intended as systematic textbook and atlas for the beginner and recent survey of the field for the specialist. In order to provide an essentially practical book, theory is omitted, the emphasis being entirely on the clinical interpretation of electrocardiograms and roentgenograms.

CARTER JAY BAILEY

The fundamentals of electrocardiographic interpretation. Second edition. With a foreword by Horatio Burt Williams. Springfield Ill. Charles C Thomas 1945 406 p illus. 21 cm. $7 00 961

Contents (abridged): The value of the electrocardiogram in clinical practice. Physiologic basis of electrocardiography. The process of electrocardiography. Artefacts and their origin. Waves of the normal electrocardiogram. Individual wave changes. Ventricular preponderance. Axis deviation with and without heart disease. Sinus arrhythmia. Premature contractions. Auricular fibrillation. Ventricular fibrillation. Paroxysmal tachycardia. A-V nodal rhythm. Disturbances of conduction. Significance of large Q_3 wave. Coronary occlusion. A simplified chest lead technic. Serial electrocardiograms. Graphic changes of coronary occlusion. Graphic changes in arterial hypertension. Myocardial damage. The dying human heart. Graphic findings in various diseases. Case histories. Glossary. Index.

Note. A successful attempt to present as simply as possible for the beginner the fundamentals of electrocardiography. In this edition the work is 70 pages longer and has been materially improved. Most of the sections contain additional material except the last chapter in which the number of case histories has been reduced. There are two new chapters, one of which deals with the important subject of serial electrocardiograms.

CHRISTIAN HENRY ASBURY

Bright's disease. Reprinted from Oxford loose-leaf medicine with the same page numbers as in that work. New York Oxford University Press, 1948 327 p. illus 24 cm. (Oxford medical publications) $9 00 962

Contents (abridged): Part I, General considerations: Historical. Protein in urine (albuminuria). Casts and cells in the urine. Blood chemistry. Etiology. Pathogenesis of renal lesions of Bright's disease. Pathology. Method of examining the patient with Bright's disease. Part II, Clinical aspects: Acute Bright's disease. Acute, subacute and chronic edematous Bright's disease, nephrotic type (nephrotic syndrome of Bright's disease). Subacute and chronic hemorrhagic Bright's disease. Chronic non-edematous Bright's disease. Sublimate kidney. Amyloidosis of kidney. Renal cysts and polycystic kidney. The kidney in syphilis. Bibliography.

Note: An important monograph which is based on the author's lifelong interest and experience with this disease and other kidney disorders. It includes wide range of clinical data obtained at the Peter Bent Brigham Hospital in Boston and at other hospitals in the same city. The first part offers critical review of the present knowledge and theories concerning Bright's disease. In the second part, which accounts for about three-fourths of the book's length, the various types of kidney disease, as named in the contents above, are discussed separately as to terminology, etiology, pathology, pathogenesis, incidence, symptoms, treatment, etc. The discussions of the type are followed by numerous case histories, each of which is described at considerable length and is then summarized and discussed by the author. The bibliography contains 497 references.

ERNSTENE, ARTHUR CARLTON

Coronary heart disease. Springfield, Ill. Charles C Thomas 1948 95 p 22 cm. $2.50 963

Contents: Introduction. Angina pectoris. Acute myocardial infarction. Acute coronary failure. Paroxysmal cardiac dyspnea. Heart block and disturbances of cardiac rhythm. Congestive heart failure. The risk of anesthesia and surgical operation in patients with coronary disease. References. Index.

Note: A brief but authoritative presentation of the principal clinical aspects of coronary heart disease. The diseases named in the chapter titles are discussed as to pathology, symptoms, signs, diagnosis, differential diagnosis, complications, prognosis, and treatment. References are given to seventy-one related books and articles. The book is most suitable as review or "refresher" for general practitioners of medicine.

FRIEDMAN MEYER

Functional cardiovascular disease. Baltimore The Williams & Wilkins Company 1947 266 p. illus. 23 cm. $3.00 964

Contents (abridged): The fever of functional cardiovascular disease. The cardiovascular phenomena of functional cardiovascular disease. The respiratory phenomena of functional cardiovascular disease. The etiology of functional cardiovascular disease. The episodic neurogenic discharge of functional cardiovascular disease. The fatigue of functional cardiovascular disease. The psychiatric aspects of func-

tional cardiovascular disease. The hyperventilation test. War neurosis, comparative study The relationship of functional cardiovascular disease and hyperthyroidism. The etiology of functional cardiovascular disease—introduction of the theory of "cortico-hypothalamic imbalance. The diagnosis of functional cardiovascular disease. Treatment. Bibliography Index.

Note A monograph that deals—in the words of the author—with "that syndrome of cardiovascular dysfunction which stems from an essential change in normal cortical and hypothalamic activities and relationships. This disorder has been known by various names in the past including "irritable heart, "soldier" heart, and "autonomic imbalance. Although the work is based partly on case histories of soldiers in World War II, the author points out the wide prevalence of the disease among civilians. A great deal of evidence is marshalled to support the physiological theory of cortico-hypothalamic imbalance, but the treatment recommended leans heavily on psychological techniques. The bibliography contains 219 references to pertinent literature.

GOLDBERGER EMANUEL

Unipolar lead electrocardiography including standard leads unipolar extremity leads and multiple unipolar precordial leads. With 88 illustrations. Philadelphia Lea & Febiger 1947 182 p illus. 24 cm. $4 00 965

Contents: Section I, The principles of electrocardiography and the normal electrocardiogram. The electrical currents that are produced by normal heart muscle. The method of taking unipolar extremity leads and unipolar precordial leads. The basic normal unipolar lead patterns. The relations between standard leads and unipolar extremity leads, and the relations between ordinary precordial leads and unipolar precordial leads. The normal electrocardiogram—the effects of the position of the heart on the normal electrocardiogram—some normal measurements of the electrocardiogram. Section II, Abnormal electrocardiographic patterns The effects of hypertrophy of the heart on the electrocardiogram. Bundle branch block. Myocardial injury The effects of digitalis on the electrocardiogram. Appendix. References. Index.

Note A valuable monograph for specialists in electrocardiography It summarizes the results of the author's own investigations of unipolar leads and compares them to the types of leads in use. The illustrations are mainly reproductions from electrocardiograms. There is an extensive bibliography

GOLDBLATT HARRY

The renal origin of hypertension. Springfield Ill. Charles C Thomas 1948 126 p illus 24 cm (American lecture series Paul R. Cannon, editor Publication no 14) $6 00 966

Contents (abridged) Production of experimental renal hypertension by various methods. Production of experimental renal hypertension by constriction of main renal artery Pathologic changes in the organs of animals with persistent hypertension. Pathogenesis (mechanism of development) of experimental renal hypertension. The humoral mechanism of experimental renal hypertension. Renin. Hypertensinogen. Hypertensin. Hypertensinase The juxtaglomerular apparatus. The treatment of hypertension—medical treatment—surgical treatment. Summary of the similarities and differences between human essential and experimental human hypertension. Bibliography Index.

Note. The main feature of this short book is the fairly detailed discussion of the author' own experiments on animals in which hypertension was induced by mechanical restriction of one or both main renal arteries. The results of these experiments are related to the experimental findings of other investigators and to the pertinent literature of the topic.

GRAYBIEL ASHTON AND PAUL D WHITE

Electrocardiography in practice. Second edition with 323 illustrations. With the assistance of Louise Wheeler and Conger Williams. Philadelphia W B Saunders Company 1946 458 p. illus. 20 cm. $8 50 967

Contents (abridged) Part I, Physiologic principles and technic The normal electrocardiogram. Electrocardiographic leads. Analysis of individual complexes and time intervals Part II, Variations of the normal electrocardiogram Effect of position of heart. Variations in amplitude of QRS waves, S–T segments, and T waves. Variations in the electrocardiograms of normal aviators. Effect of age on the electrocardiogram. Variations of the normal chest leads. Part III, The arrhythmias Part IV Etiologic types and patterns Congenital heart disease. Rheumatic heart disease. Cardiovascular syphilis. Avitaminosis and malnutrition. Endocrine diseases Hypertensive heart disease. Coronary heart disease. Pericarditis. Drug action. Part Electrocardiograms for practice in interpretation. Appendices. General subject index.

Note Essentially collection of electrocardiograms depicting the variations in pattern produced by the healthy and diseased or malfunctioning heart. The purpose of the volume is to aid the practitioner in interpreting electrocardiograms commonly seen in medical practice. Each chart is accompanied by the interpretation, the clinical findings, and summary of the case. This edition has been revised and reorganized to incorporate recent advances in the field and new cases dealing with precordial leads have been added.

HERNDON, RICHARD FLEETWOOD

An introduction to essential hypertension. Springfield, Ill. Charles C Thomas 1946 88 p illus. (part col d) 23 cm. $3 00 968

Contents Introduction—normal regulation of blood pressure—definition Etiology and mechanism. Physiology Pathology Clinical aspects. Prognosis. Diagnosis. Treatment. Index.

Note Although hypertension, or high blood pressure has been the subject of much research its precise cause has not yet been ascertained. This brief work presents concise statement of what is known regarding the mechanics, diagnosis, and treatment of the disease. It is based on review of the literature of the subject and is intended to provide the general practitioner with reliable picture of the present knowledge and to guide him in further reading in the field. The numerous footnote references constitute an extensive yet selective bibliography

JOSIAH MACY JR., FOUNDATION

Factors regulating blood pressure. First conference. Edited by B W Zweifach and Ephraim Shorr New York Josiah Macy Jr Foundation 1947 175 p illus. 23 cm. Paper $1 90 969

Contents: The role of the Conference in scientific investigation, by F Fremont-Smith Relation of the nervous system to acute and chronic experimental hypertension, by E. Ogden. Humoral role of the kidney in experimental hypertension, by A. Grollman. Hepato-renal factors in experimental hypertension, by E Shorr B. Zweifach, R. F Furchgott and S. Baez. Physiological and chemical characteristics of hepatic vaso-depressor (VDM) involved in circulatory regulation, by A. Mazur and E. Shorr. Physiological and chemical characteristics of renal vaso-excitor (VEM) involved in circulatory regulation, by R. F Furchgott and E. Shorr. Salt choice *by hypertensive rats, by E. Landis and M. L Abrams. The relation* of the adrenal glands to the renal vaso-excitor mechanism during experimental hypertension, by B. W Zweifach, S. Rosenfeld, S. Baez and E. Shorr Present status of humoral factors in human hypertension by L. Dexter The validity of the clearance technique in the measurement of renal blood flow in normal man and in patients with essential hypertension, by S. E. Bradley Influence of low salt and low protein diets upon human hypertension, by W Goldring. Some humoral factors in hypertension, by I. H. Page. The present status of the treatment of human hypertension with renal extracts, tyrosinase, quinones, etc., by H. A. Schroeder Treatment of prophylaxis of experimental renal hypertension with renal extracts, including observations on cachexia, by G. E. Wakerlin.

—— Factors regulating blood pressure. Second conference. Edited by B W Zweifach and E. Shorr New York Josiah Macy Jr Foundation, 1948 170 p illus. 23 cm. Paper $2 75 970

Contents Josiah Macy, Jr Foundation Conference program, by F Fremont-Smith. The juxtaglomerular apparatus, its role in the renal vasopressor mechanism, by F W Dunihue. Relation of adrenal cortical stimulation to histological alterations in the kidneys and cardiovascular tissues of mice, by T F Dougherty The role of the kidney in the pathogenesis of hypertension as determined by study of the effect of nephrectomy on the blood pressure of normal and hypertensive animals, by A. Grollman. Renin concentration of the kidney in experimental renal hypertension, by G. E. Wakerlin, J. Marshall and H. Minatoya. Flaws in Hans Selye's theory of the diseases of adaptation, by H. Selye. Pressor sub-

stances in human hypertensive blood, by H. A. Schroeder, N. S. Olsen and M. L. Goldman. Hepato-renal vasotropic factors in blood of patients with essential hypertension, by B. W. Zweifach and E. Shorr. The presence in blood of a principle which elicits sustained pressor response in nephrectomized animals, by R. E. Shipley. The nature of a principle which elicits a sustained pressor response in nephrectomized animals, by O. M. Helmer.

Note: Transactions, including papers and discussions, of the first and second conferences on blood pressure control are contained in these volumes. Some of the authors have included references to the related literature. The series is intended for specialists in this branch of medicine.

KATZ, LOUIS NELSON

Electrocardiography including an atlas of electrocardiograms. Second edition thoroughly revised. Illustrated with 525 engravings. Including over 1000 electrocardiograms. Philadelphia Lea & Febiger 1946 883 p illus. 26 cm. $12.00 971

Contents (abridged) Section I, Theory of electrocardiography: The origin and distribution of the electrical currents generated by the heart. The special anatomy and the physiological principles of the heart, and their bearing on the electrocardiogram. The meaning of the electrocardiogram and its place in clinical practice. Section II, Systematic description of electrocardiographic contour: Electrocardiographic terminology and the approach to a record. The normal electrocardiogram. The abnormal electrocardiogram. General considerations of coronary insufficiency and the electrocardiogram of coronary disease. The electrocardiogram of chronic coronary disease and in angina pectoris, genesis of coronary contour. The electrocardiogram in chronic disease. Section III, Systematic description of the electrocardiogram in the arrhythmias. Appendix. Index.

Note. A comprehensive treatise written by the Director of Cardiovascular Research at the Michael Reese Hospital in Chicago. It is intended primarily for use by advanced medical students and medical school graduates who are beginning the study of electrocardiography. The first section accounts for only approximately one-tenth of the book's length; nevertheless it provides an adequate discussion of the theoretical aspects. The discussions in the second and third sections are exceptionally full, and they are supplemented by reproductions of hundreds of electrocardiograms, each one of which is discussed in a separate paragraph or caption. Each of the three sections is equipped with an extensive bibliography. In this edition the work has been very extensively revised and augmented. There are now twenty-three chapters instead of sixteen as in the first edition, and the total number of pages has been increased by about one-half. The author states that 249 of the illustrations in this edition are new. A change of considerable interest is the introduction of a third chest lead, designated as CF. The author's *Exercises in electrocardiographic interpretation*, second edition revised, illustrated with 141 engravings, Philadelphia: Lea & Febiger 1946, 288 p., $6.00, is a companion work.

LEAMAN, WILLIAM GILMORE, JR., editor

Management of common cardiac conditions. Philadelphia J B Lippincott Company 1946 306 p illus. (part col d) 23 cm. $5.00 972

Contents. The treatment of congestive cardiac failure with special reference to the prolonged use of mercurial diuretics, by W. G. Leaman, Jr. The diagnosis and treatment of congenital cardiovascular anomalies, by R. Ash. Treatment of acute rheumatic carditis, by M. H. Easby. Convalescent care in rheumatic fever, by E. Roberts. The treatment of subacute bacterial endocarditis, by W. L. Geiter, L. E. Maher and M. Dworin. The medical treatment of hypertension, by J. Q. Griffith, Jr. and M. A. Lindauer. The diagnosis and treatment of acute pericarditis, by J. H. Vander Veer and J. A. Wagner. The treatment of acute myocardial infarction, by W. D. Stroud and M. W. Stroud, 3rd. Comments on chronic coronary disease, by L. B. Laplace. The diagnosis and treatment of cardiovascular syphilis, by E. H. Kampmeier. Some thoughts on the diagnosis and treatment of pulmonary heart disease (cor pulmonale), by T. M. Durant. Primary sclerosis of the pulmonary artery, by R. Durgin and H. Ingleby. Clinical disorders of the heart beat, by S. Bellet. The meaning of the electrocardiogram and its value to the general practitioner, by L. N. Katz and L. G. Kaplan. Review of surgery of the heart, by W. H. Erb. Psychosomatic aspects of cardiovascular disease, by E. Weiss. Recent trends in the diagnosis and treatment of peripheral vascular disease, by D. W. Kramer.

Note: Together these papers constitute a useful survey of recent advances. The collection is intended for the general medical practitioner. It is reprinted from Clinics, Vol. 5, no. 1, June, 1946.

LEVINE, SAMUEL ALBERT

Clinical heart disease. Third edition, revised and reset. Philadelphia W B Saunders Company 1945 462 p. illus. 24 cm. $7.50 973

Contents (abridged) Rheumatic fever. The development of rheumatic heart disease—mitral valve disease. Diseases of the aortic and tricuspid valves. Diseases of the pericardium. Angina pectoris and coronary thrombosis. Hypertensive heart disease. Thyroid heart disease. Syphilitic heart disease. Bacterial endocarditis. Congenital heart disease. Functional heart disease. Paroxysmal rapid heart action. Acute cardiovascular emergencies. The significance of bronchial and other factors in the production of dyspnea. The clinical significance of the systolic murmur. The patient with heart disease as a surgical or obstetrical risk. Factors concerning prognosis in heart disease. Clinical electrocardiography. Index.

Note. This volume is designed as a simple discussion of common problems of heart disease for the general practitioner of medicine. The various chapters are essentially short treatises on particular types of heart disease, and many of these were previously published in substantially the same form in various journals. Although the chapters on some diseases, such as angina pectoris, contain a long section on treatment, in general the emphasis is on description of the disease and on diagnostic considerations. The new edition is approximately the same length as the 1940 version, though the use of more compact type has reduced the number of pages. New developments have necessitated amplification of such subjects as surgical treatment of patent ductus arteriosus and chemotherapy of subacute bacterial endocarditis. There are new inclusions such as scleroderma heart and rupture of valves. The discussion of electrocardiography has been expanded, and there is a brief new section on phonocardiography. There are no literature references.

LIBMAN, EMANUEL, AND CHARLES K. FRIEDBERG

Subacute bacterial endocarditis. Edited by Henry A. Christian. Reprinted from Oxford loose-leaf medicine with the same page numbers as in that work. New York Oxford University Press, 1948 113 p illus. 24 cm. (Oxford medical publications) $3.50 974

Contents (abridged) Definition and classification of endocarditis. Subacute bacterial endocarditis. Mild cases of subacute bacterial endocarditis. The bacteria-free stage. Diagnosis of bacteria-free stage. Transitional cases of subacute bacterial endocarditis. Recurrent cases of subacute streptococcal endocarditis. Prognosis of subacute bacterial endocarditis. Treatment of subacute bacterial endocarditis—penicillin therapy. Other forms of antibiotic therapy and chemotherapy. Surgical measures of treatment. Bibliography.

Note: A monograph intended for all physicians who treat bacterial endocarditis. Essentially it is a summary of accepted viewpoints. There are some references in the text to the related literature, as well as a full bibliography. This is the second edition of the work and it has been very substantially revised in order to cover the treatment of this disease with penicillin and other antibiotics. The revision is entirely the work of Dr. Friedberg.

LUISADA, ALDO A.

Heart, a physiologic and clinical study of cardio-vascular diseases. With a foreword by Herrman L. Blumgart. Baltimore The Williams & Wilkins Company 1948 653 p. illus. 26 cm. $10.00 975

Contents (abridged) History of cardiology. The clinical study of the cardiac patient. The technical study of the cardiac patient. Causes of cardio-vascular diseases. Classification of cardio-vascular diseases. The rheumatic disease. Diseases of the endocardium. The valvular defects of the left heart. The valvular defects of the right heart. Complex malformations of the heart. Clinical syndromes due to diffuse myocardial lesions. The heart in metabolic, vitamin and endocrine disturbances. The diseases of the coronary system and myocardial infarction. Diseases of the pericardium and of the mediastino-pleural region. Diseases of the aorta and of the pulmonary artery. Hypertension of the greater circulation and hypertensive heart disease. Hypertension of the lesser circulation and pulmonary heart disease. Hypotension—shock. Diseases of the peripheral arteries. Diseases of the veins. Associated and complex cardiac diseases. Paroxysmal cardio-respiratory attacks. Heart failure. The cardiac

patient as an obstetrical and surgical risk. Action of drugs useful for the cardiac patient. The management of the cardiac patient. Diets. Prescriptions Index.

Note A relatively inclusive book which was designed chiefly for general practitioners of medicine. In most of the chapters practically all aspects of the subject under discussion are touched upon but the treatment of some of them is extremely brief amounting to little more than an outline. However each chapter is accompanied by a good list of references to related literature. As the chapter titles indicate, diseases are classified on the basis of anatomical-clinical syndromes rather than etiology The work is exceptionally well illustrated.

MOVITT, ELI RODIN

Digitalis and other cardiotonic drugs New York Oxford University Press 1946 204 p illus 24 cm. (Oxford medical publications) $5 75 976

Contents (abridged) Digitalis folium. Historical data. Source and chemical structure. Pharmacology Clinical applications. Digitalis lanata: Source and chemical structure. Pharmacology Clinical applications. Lanatoside C Chemical structure. Pharmacology Clinical applications. Other cardiotonic glycosides from digitalis plants: Digitaline nativelle. Digoxin. Gitalin (amorphous) Strophanthin: Source and chemical structure. Pharmacology Clinical applications. Squill. Source and chemical structure Pharmacology Clinical applications. Other cardiotonic agents of plant origin. Thevetin. Various glycosides of plant origin. Cardiotonic glycosides of animal origin and cardiotonic alkaloid. Toad poisons. Erythrophleine. Conclusions. Appendices. Index of subjects. Index of authors.

Note. The purpose of this monograph is to place at the disposal of the general practitioner current knowledge regarding the chemical, pharmacologic, and clinical behavior of drugs used in the treatment of heart diseases. Emphasis is placed on the pure cardiac glycosides, their effect on the heart and the circulatory system, and methods of application. The book is based on a survey of the literature of the subject, and each chapter concludes with an extensive bibliography A second edition was scheduled for publication in 1949

NEUHOF HAROLD

Venous thrombosis and pulmonary embolism. New York Grune & Stratton 1948 159 p illus. 26 cm. (Mt. Sinai Hospital monograph no 2) $4 50 977

Contents (abridged) Part I, Venous thrombosis and peripheral pulmonary embolism. Diagnosis of venous thrombosis in the lower extremities. Atypical forms of venous thrombosis. Postoperative pulmonary embolism. Venous thrombosis and pulmonary embolism in childhood. Surgical treatment of venous thrombosis An evaluation of the present status of anticoagulant therapy Part II, Massive pulmonary embolism based in part on a study of 11 fatal cases. The mechanism of death in pulmonary embolism. The problem of diagnosis of massive pulmonary embolism. Prophylaxis of pulmonary embolism. Treatment of massive pulmonary embolism—embolectomy Index

Note In this monograph the author has attempted to clarify the large literature of this controversial subject The first part of the book is the result of studies of patients in the wards at Mt. Sinai Hospital, New York. The second part of the book is the result of studies carried out with Dr Samuel Klein which led to the development of a surgical treatment by way of the right ventricle. Selected cases are described in detail and the results of the studies are summarized in a number of tables. The bibliography contains references to 131 books and articles.

PAGE, IRVINE HEINLY AND ARTHUR CURTIS CORCORAN

Arterial hypertension its diagnosis and treatment. Chicago The Year Book Publishers Inc., 1946 350 p. illus 21 cm. (The general practice manuals) $4 50 978

Contents (abridged) Section I, Normal blood pressure classification of hypertension. Early stages of hypertension. Section II, Essential and malignant hypertension. Physical examination. Psychotherapy and related problems. Section III, Circulation in early hypertension. Clinical considerations in early hypertension. Section IV Hypertensive heart disease Effects of arterial hypertension on the brain. The kidneys in hypertension. Hypertension and pregnancy Section Treatment with thiocyanate, kidney extract, Vitamin A. Treatment by nephrectomy Surgical treatment of hypertension. Appendices. Grading of retinopathy Estimation of cardiac hypertrophy Index.

Note A compact manual which is intended primarily for general practitioners. The causes, symptoms, diagnosis, and treatment of the various types of arterial hypertension are clearly described. The text is developed according to the evolution of the disease itself and provides a useful and reliable summary of present-day information on this subject. Bibliographies follow each section. The authors are physicians associated with the Research Division of the Cleveland Clinic Foundation, Cleveland.

RISEMAN, JOSEPH EPHRAIM FRANK

P-Q-R S-T a guide to electrocardiogram interpretation. Second edition. New York The Macmillan Company 1947 84 p. illus. 15 cm. $3.50 979

Note. A pocket-sized reference book for the medical student or clinical technician who is beginning the study of electrocardiograms. The purpose of the work is to instill confidence in the beginner by showing him how to make accurate diagnoses of heart conditions through correct interpretation of the cardiograph tracings. Approximately 180 tracings representative of normal and diseased heart conditions are included together with accompanying explanatory text.

TAUSSIG HELEN B

Congenital malformations of the heart. New York The Commonwealth Fund 1947 618 p illus. (part col d) 26 cm. $10 00 980

Contents (abridged) Foreword, by Edwards A. Park. Part One, Physiology of the malformed heart and diagnostic principles Embryology etiology basic principles of analyses, and fetal circulation. Methods of diagnosis. Cyanosis. Part Two, Malformations which deprive the body of an adequate amount of oxygenated blood. Defective development of the right ventricle and tricuspid atresia. The tetralogy of Fallot. Pulmonary stenosis or atresia and extreme dextroposition of the aorta. Aortic atresia and marked hypoplasia of the aortic orifice. Absence of the aortic arch. Complete transposition of the great vessels and the common associated anomalies. Truncus arteriosus. A single ventricle and a rudimentary outlet chamber Anomalies of the venous return. The anomalous origin of the left coronary artery from the pulmonary artery Part Three, Malformations which permit the body to receive an oxygen supply sufficient for the growth of the individual: Persistent patency of the ductus arteriosus. Defects in the auricular septum. Defects in the ventricular septum The Eisenmenger complex. Aneurysm in the sinus of Valsalva with rupture into the right ventricle. Anomalies of the aortic valve and of the ascending aorta. Dextrocardia with or without situs inversus. Ebstein's disease. Complete heart block and other cardiac arrhythmias. Part Four, Therapeutic measures General medical care Medical aspects of the surgical correction of congenital pulmonary stenosis or atresia. Index.

Note An important book which is based largely on the author's own observations and research. Its main theme is the diagnosis of congenital malformations of the heart in the living, chiefly on the basis of information gathered by physical examination, roentgenographic and fluoroscopic studies, and the electrocardiogram, techniques which are available to all clinicians. The malformations discussed are illustrated with case histories, X-rays, electrocardiograms, photographs, and drawings of specimens. The functional aspects of the malformations are explained and illustrated by 44 three-color diagrams showing the course of the circulation. Diagrams of the contours of the abnormal heart and a normal heart are placed in juxtaposition to each of the X-rays for better understanding of the characteristic changes which accompany the malformation.

TREIGER, IRVING J

Atlas of cardiovascular diseases correlation of clinical electrocardiography and cardiac roentgenology with clinical history and autopsy findings. Illustrated with 69 plates containing 244 illustrations 11 in color St. Louis The C. V Mosby Company, 1947 180 p illus (part col d) 30 cm. $10.00. 981

Contents Normal heart. Rheumatic heart disease. Arteriosclerotic heart disease. Hypertensive heart disease. Syphilitic heart disease. Congenital anomalies of the heart and large blood vessels. Summary Index.

Note: Most of this book consists of full-page plates, each of which bears several illustrations of an individual case of cardiovascular disease. Each plate is accompanied on the opposite page by a short summary and description of the case. The illustrations include both colored and black-and-white photographs of pathological specimens, and reproductions of roentgenograms and electrocardiograms. There are between four and six plates to each subject, such as mitral stenosis, which is classed under rheumatic heart disease. Under several of these subjects, however, there are as many as thirteen plates. The final chapter summarizes for each condition the correlation of roentgenology, cardiography, and pathology typical of that condition. There are no literature references.

DERMATOLOGY

ANDREWS GEORGE CLINTON

Diseases of the skin for practitioners and students. Third edition, with 971 illustrations. Philadelphia W B Saunders Company 1946 937 p illus. 25 cm $11.50 982

Contents (abridged) Symptomatology and general diagnosis. Roentgen-ray therapy. Radium therapy. Surgical diathermy. Dermatoses due to physical causes. Lichen planus. Acne vulgaris. Diseases due to fungi. Tuberculosis cutis. Syphilis. Diseases due to animal parasites. Diseases caused by filterable viruses. Deficiency diseases. Hypertrophies and atrophies. Cutaneous infiltrations of products of metabolism. Diseases of congenital origin. Malignant neoplasms of the skin. Diseases of the mucous membranes. Diseases of the cutaneous blood vessels. Anomalies of pigmentation. Tropical diseases of the skin. Index.

Note A standard treatise on skin diseases from the clinical viewpoint. It is used both as a textbook for undergraduate medical students and a reference or office book for general practitioners who treat or at least want to differentiate skin diseases from other conditions with dermatological manifestations. Diseases are classified according to etiology and the commoner dermatoses are emphasized. The book is very fully illustrated and the majority of the illustrations are reproduced from photographs of case histories. The general plan and the length of this edition are close to those of the preceding edition. However there are numerous small changes throughout the work and there has been considerable rewriting of sections by the author and associated specialists. Discussions of some 60 new diseases have been added as well as material on the new antibiotics and other recent developments. Two new chapters discuss lupus erythematosus and the application of roentgen ray physics to dermatology.

BECKER SAMUEL WILLIAM AND MAXIMILIAN E OBERMAYER

Modern dermatology and syphilology Second edition. 461 illustrations in text, 37 full color plates Philadelphia J B Lippincott Company 1947 1017 p illus. (part col d) 26 cm. $18.00 983

Contents (abridged) Dermatologic diagnosis. Therapy and formulary. Toxic dermatoses of epidermal origin. Toxic eruptions of dermal origin. Eruptions due to drugs. The neurodermatoses. Pruritus. The papulosquamous eruptions. Hyperkeratoses, dyskeratoses and hyperplasias. Physical dermatoses. Dermatoses of vascular origin. Pigmentary disturbances. Trophic and deficiency diseases. Cutaneous infection. Cutaneous tuberculosis. Lepra. Diseases due to fungi. Diseases due to filtrable virus. Diseases due to animal organisms. Diseases of the sweat glands. Diseases of the hair and hair follicle. Diseases of the nails. Diseases of the mucous membranes and mucocutaneous junctions. Premalignant lesions. Neoplasms. Occupational and industrial dermatoses. Allergy in dermatology. Tropical diseases. Syphilis. Prenatal syphilis. The diagnosis of syphilis. Nonspecific treatment of syphilis. Specific treatment of syphilis. Treatment of the pregnant woman and of prenatal syphilis. The curability of syphilis. Social aspects of syphilis. Public effort against syphilis. Index.

Note: (1289) This detailed presentation of the etiology, diagnosis, and treatment of skin diseases is designed primarily to meet the needs of undergraduate students and general practitioners. Thus, only those diseases which are commonly seen in the United States, Canada, and Great Britain are discussed. The volume is particularly well illustrated and lists of references are given at the end of each chapter. Revisions and additions made in this edition include new material on the use of dioxane in the preparation of microscopic sections, modern vehicles used in preparation of local remedies, and an evaluation of newer antibiotics for dermatology. Advances in the field of vitamin therapy have necessitated revision of the chapter on tropical and deficiency diseases. The latter part of the volume, constituting a compendium of practical information on syphilis, has been extensively rewritten in the light of recent knowledge and research.

MACKEE GEORGE MILLER, AND ANTHONY C. CIPOLLARO

X-rays and radium in the treatment of diseases of the skin. Fourth edition, thoroughly revised. Hamilton Montgomery contributor Illustrated with 321 engravings, and 4 colored plates. Philadelphia Lea & Febiger 1946 668 p. illus (part col d) 24 cm. $10 00 984

Contents (abridged) Fundamental electrical considerations in relation to X-ray apparatus. The radioactive elements and their radiations. Definitions of quantity and quality of radiation. Physical factors affecting quantity and quality of radiation. Tissue dosage. Protection. Arithmetical computation of X-ray dosage. Practical X-ray technic for the beginner. Roentgen therapy with extremely long wave lengths. Biologic and biochemical effects of radiation. Pathologic histology of radiodermatitis. Diseases due wholly or partly to pyogenic organisms. Diseases due to fungi. Eczema. Psoriasis. Lichen planus. Pruritus—prurigo. Diseases of the hematopoietic system. Diseases supposedly due directly or indirectly to the tubercle bacillus. Verrucous lesions and eruptions. Keloid and congenital keratodermas. Benign new growths. Malignant new growths. The medicolegal aspects of roentgen and radium therapy. Index.

Note A standard treatise in which the subject is covered from the viewpoint of practicing physicians, particularly specialists in roentgenology and in dermatology. The basic physics and biology are covered briefly and a certain amount of historical material is included, but the bulk of the book deals with the technical problems of radiation therapy and with results obtained. The discussion of techniques is based largely on the experience of the authors; but the techniques and opinions of others are referred to and, in some cases, evaluated. The present edition reflects the fact that the use of radium is indicated less often today than it was ten years ago because of the development of new methods of treatment which are superior. A valuable feature of the book is the authors' discussion of the comparative values and uses of the various therapies in relation to specific diseases.

ORMSBY OLIVER SAMUEL, AND HAMILTON MONTGOMERY

Diseases of the skin. Seventh edition thoroughly revised with 683 figures containing 764 illustrations and 18 colored illustrations on 11 plates. Philadelphia Lea & Febiger 1948 1462 p. illus (part col'd) 25 cm. $18.00 985

Contents (abridged) Diseases of the skin Class I, Hyperemias and inflammations. Class II, Hemorrhages. Class III, Hypertrophies. Class IV Atrophies. Class V Pigmentary affections. Class VI, Diseases of metabolism. Class VII, Neoplasms. Class VIII, Chronic specific inflammations. Class IX, Neuroses. Class X, Parasitic affections. Diseases due to plant parasites. Diseases due to animal parasites. Class XI, Diseases of the appendages. Diseases of the sweat glands. Diseases of the sebaceous glands. Diseases of the hair and hair follicles. Diseases of the mucous membranes in proximity to the skin. Index.

Note (1290) In this text and reference book for advanced students and specialists the initial chapters serve as an introduction to special terminology, physiological and pathological processes, diagnostic methods, drugs, chemicals, radiotherapy and other therapeutic measures as they apply to the skin. The second portion discusses each disease under the customary headings, giving full data in condensed form, with numerous footnote references. This edition has been brought up to date by the inclusion of recent findings in the field of dermatology and by the elimination of obsolete material. Particularly notable are the changes arising from the growing knowledge of tropical diseases and the treatment of syphilis and other diseases with penicillin and the newer antibiotics.

SCHWARTZ LOUIS AND SAMUEL M PECK

Cosmetics and dermatitis New York Paul B Hoeber Inc., 1946 189 p illus (part col d) 22 cm. $4.00 986

Contents: Anatomy and physiology of the skin and its appendages. Allergic dermatoses. History. Possible causes of cosmetic dermatitis. Reports of dermatitis from the use of cosmetics in general. Occupational dermatitis among barbers, hairdressers, and beauticians. Creams. Dentifrices. Deodorants. Depilatories. Hair preparations. Lipstick. Nail preparations. Perfumes. Cosmetic powders. Cosmetic preservatives. Cleansers. Suntan preparations. Diagnosis of cosmetic dermatitis. Method of testing new cosmetics. Treatment of cosmetic dermatitis. Beneficial value of cosmetics. Cosmetic advertising. Certified cosmetic colors. Index.

Note Cosmetic preparations and allied substances are here considered mainly from the viewpoint of general medical practitioners and dermatologists. The treatment is relatively brief but is supplemented by adequate literature references, typical formulas, and photographs of typical cases of dermatitis in which the causative agent was cosmetic preparation or ingredient. The authors are associated with the United States Public Health Service.

SULZBERGER, MARION BALDUR, AND JACK WOLF

Dermatologic therapy in general practice. Third edition. Chicago The Year Book Publishers Inc. 1948 663 p illus 21 cm $8.50
987

Contents: General dermatologic management. Eczematous dermatoses. Urticaria. Atopic dermatitis. Dermatoses due to fungi. Acne vulgaris and other acneform dermatoses. Pyodermas. The sulfonamides and high-dosage calciferol. Psoriasis and seborrheic dermatitis. Bullous and vesicular dermatoses. Zoonoses. Common tumors of the skin. Miscellaneous dermatoses. Drug eruptions. Miscellaneous skin disorders. Early syphilis. Other forms of syphilis. Index.

Note: (2798) The purpose of this volume is to provide the general practitioner with description of therapeutic procedures and medicaments which he can apply in the treatment of common skin diseases. Methods of diagnosis are discussed but emphasis is placed on the chemical characteristics of each disease and forms of treatment. Formulas for various lotions and salves are frequently cited. Recent developments in the field have been incorporated into this new edition, accounting for 30 additional pages.

URBACH ERICH

Skin diseases nutrition and metabolism with the collaboration of Edward B LeWinn New York Grune & Stratton 1946 634 p illus 23 cm. $10 00
988

Contents Part One, The influence of nutrition on the physiology of the skin. Metabolism and biochemistry of the skin. Influence of diet on metabolism of the skin. Part Two, Nutritional causes of dermatoses: Skin diseases due to malnutrition. Food allergy as cause of skin diseases. Skin diseases due to alimentary infections and alimentary intoxications. Part Three, Influence of diseases of the gastrointestinal tract, liver and pancreas on the skin. Dermatoses due to diseases and dysfunction of the gastrointestinal tract. Dermatoses due to diseases of the liver and pancreas. Part Four Nutritional therapy of skin diseases. Dermatitis (eczema) Urticaria and associated conditions. Psoriasis. Skin diseases due to vitamin deficiencies. Diseases of sebaceous and sudoriferous glands. Diseases of the cutaneous blood and lymph vessels. Purpura. Lichen planus. Light dermatoses. Pemphigus and associated diseases. Pyogenic infections of the skin. Cutaneous tuberculosis. Lipoid diseases of the skin. Wounds, ulcers, burns. Pigmentary diseases of the skin. Diseases of the nails. Part Nutritional tables. Index of authors. Index of subjects.

Note A comprehensive presentation that is of value not only to general practitioners, but to specialists in dermatology and allergy as well. It is based on the author's own experience and on an extensive review of the literature. There are 1511 footnote references to pertinent literature and 244 illustrations. Most of the tables in the appendix are aids in the planning of special diets.

WIENER, KURT

Skin manifestations of internal disorders (dermadromes) With 386 text illustrations and 6 color plates. St. Louis The C. V Mosby Company 1947 690 p illus. (part col'd) 25 cm. $12.50
989

Contents (abridged) The dermadromes of systemic infections. Systemic infections. Helminthic diseases. Tuberculosis. Leprosy. Dermadromes of intoxications. Disorders of the circulation. Diseases of the kidneys. Disorders of the endocrine glands. Puberty Menstruation. Pregnancy. Miscellaneous dermatoses with endocrine background. Ageing. Metabolic disorders. Disorders of the blood and blood forming organs. Dermadromes of internal cancer. Disorders of the nervous system. Psychoses and psychodermatoses. Disorders of the gastrointestinal tract. Diseases of the liver and pancreas. Disorders of the respiratory tract. Index.

Note A condensed and very comprehensive survey of the knowledge of skin disorders which are due to systemic disease. The author's purpose was to give the dermatologist broader background of information on internal causes for various dermatological manifestations, and to furnish the specialist in internal medicine with guide to skin conditions as an aid in diagnosis of internal disease. He has omitted certain disease entities like syphilis which form actually specialty in themselves, and has included such common illnesses as measles which fall outside the dermatologist's usual field. Essentially the work is summary of the immense body of pertinent literature. References are made directly from the text to fuller citations of the original articles given in the form of footnotes at the bottom f each page. Most of the illustrations are reproductions of photographs.

YEAR BOOK OF DERMATOLOGY AND SYPHILOLOGY

The 1948 Year book of dermatology and syphilology edited by Marion B Sulzberger and Rudolf L. Baer Chicago The Year Book Publishers Inc., 1949 560 p illus. 19 cm. (The practical medicine year books) $5 00
990

Contents Eczematous eruptions of the hands. Treatment and prevention (exclusive of venereal diseases) X-ray and other physical therapy Eczematous dermatitis and urticaria (allergic and nonallergic) allergy Drug eruptions (allergic and nonallergic) Miscellaneous inflammatory dermatoses. Other dermatoses. Cancers, precancerous, other tumors. Mycosis fungoides; leukemia. Fungous infections. Other infections Infestations. Venereal diseases (exclusive of gonorrhea) Investigative studies Miscellaneous. Index. Index to authors.

Note (2302a) The progress of dermatology and syphilology is summarized each year in this illustrated digest of the international periodical literature of these specialties. The significant articles are selected and are abstracted at fair length. The abstracts are classified under the chapter titles as given above. In all cases reference to the original publication is given, and in many instances the abstract is supplemented by short comment written by the editor The volume is generously illustrated and fully indexed.

OTOLARYNGOLOGY

BALLENGER, HOWARD CHARLES

A manual of otology rhinology and laryngology Third edition enlarged and thoroughly revised. With 135 illustrations and 3 color plates Philadelphia Lea & Febiger 1947 352 p illus. (part col d) 24 cm. $4.50
991

Contents (abridged) Part I, The nose and accessory sinuses Acute inflammatory diseases of the nose. Infections of the sinuses. Hyperplastic rhinitis—nasal polyps—chronic atrophic rhinitis. Allergy—hay fever—hyperesthetic rhinitis—asthma—nasal hydrorrhea. Headaches and neuralgias of the face and head. The nasal septum—fractures of the facial bones Part II, The pharynx and larynx Diseases of the pharynx and fauces. Diseases of the tonsils. Deep neck infections. Part III, Diseases of the larynx. Part IV The ear. The functional tests of hearing Diseases of the auricle and external auditory canal. Diseases of the tympanic membrane and eustachian tube. Acute diseases of the mastoid. Chronic diseases of the middle ear and mastoid. Facial paralysis. Intracranial complications of the ear nose and throat. Physiology functional tests and inflammatory diseases of the labyrinth. Physical therapy in otolaryngology Index.

Note (2301) This book is based on the more comprehensive Ballenger's *Diseases of the nose, throat and ear* sixth edition, Philadelphia Lea & Febiger 1947 It includes accepted methods and treatments, but omits unnecessary theoretical material and surgical procedures. This edition is basically the same as the 1943 edition, with relatively brief alterations to bring it up to date. There is new chapter on headaches and neuralgias of the face and head and some additional anatomical illustrations.

BALLENGER, WILLIAM LINCOLN, AND HOWARD CHARLES BALLENGER

Diseases of the nose, throat and ear Ninth edition, thoroughly revised assisted by John Jacob Ballenger With 597 illustrations and 16 plates. Philadelphia Lea & Febiger 1947 993 p illus. (part col d) 24 cm. $12.50 992

Contents (abridged) Part I, The nose and accessory sinuses The surgical correction of facial deformities. The surgical correction of obstructive lesions of the septum. Allergy Headache—neuralgia of the face and head. Etiology of inflammatory diseases of the nose, throat and sinuses. The general and local treatment of sinus infections. The surgical treatment of sinusitis. Part II, The pharynx and fauces: Surgical anatomy of the pharynx and tonsil. The tonsils as foci of infection. Deep neck infections. Functional neuroses of the pharynx. Part III, Diseases of the larynx Anatomy—laryngoscopy Acute inflammatory diseases of the larynx. Paralysis and neuroses of the larynx. Defects of speech. Surgical treatment of cancer of the larynx. Malignant neoplasms of the trachea, pharynx and nose. Part IV The ear: The clinical anatomy and physiology of the ear Malformations and neoplasms of the ear Diseases of the auricle and external canal. Injuries and diseases of the tympanic membrane. Diseases of the eustachian tube. Acute suppurative otitis media. Diseases of the mastoid process. Facial paralysis. Surgery of brain abscess. Deaf-mutism. Inflammatory diseases of the labyrinth Surgery of the labyrinth. Part Bronchology esophagology and gastroscopy Index.

Note: (1104) A standard text written primarily for medical students, but of such practical nature it will be of value to the general practitioner The presentation is comprehensive and concise and covers the anatomy physiology etiology diagnosis, and treatment of the diseases under discussion. The major change in this edition consists of new chapter on headaches and neuralgia of the face and head. However some rearrangement and other revisions have been made, such as new section on rhinoplastic reconstruction and revision of the chapters on the physiology and diseases of the labyrinth, and on peroral endoscopy A three-page bibliography on gastroscopy is included.

EGGSTON ANDREW ANDERSON, AND DOROTHY WOLFF

Histopathology of the ear nose, and throat. Baltimore The Williams & Wilkins Company 1947 1080 p illus. (part col d) 26 cm. $18 00 993

Contents (abridged) The ear The temporal bone. The external ear. The drum membrane. The middle ear The mastoid. The petrous apex. Pneumatization. The auditory or Eustachian tube. The eighth nerve. Histology of the ear Physiology Physiology of equilibrium and hearing. Pathology Pathology of the external ear Histopathology of the drum membrane. Inflammation of the middle ear Inflammation of the mastoid. Inflammation of the petrous. Histopathology of the inner ear. Chronic inflammatory changes in the temporal bone Neoplasms of the ear. The nose Histology of the nose and accessory sinuses. Physiology of the nose and accessory sinuses. Pathology of the nose. Intracranial complications. Chronic specific infections of the nose and accessory sinuses. The pharynx and larynx: Oral and pharyngeal pathology as manifestations of constitutional diseases Pathology of the nasopharynx and larynx. Lumps, swellings, or tumefactions of the neck. Cysts and tumors of the pharynx and larynx. Clinical pathology in its relationship to otorhinolaryngology Appendix. Index.

Note. A comprehensive treatment which is of interest to advanced medical students and interns who are preparing to specialize in either general pathology or otorhinolaryngology and is also useful as reference book to specialists already practicing in the latter field. Not only is the immediate subject fully covered, but considerable attention is paid also to basic knowledge from the fields of embryology and anatomy There are 805 figures, many of which are reproductions of microphotographs and twenty-eight plates, partly in color. Extensive bibliographies are included with most of the chapters

HOLLENDER, ABRAHAM RISEL

Office treatment of the nose, throat & ear Second, revised edition. Chicago The Year Book Publishers Inc., 1946 552 p. illus. 21 cm. $6.00 994

Contents (abridged) Section One, Part I, General survey: Evaluation of office treatment of nose, throat and ear diseases. Immunization. Endocrine therapy Nutritional management. Pharmacotherapy Physical therapeutic procedures. Office surgery Radiotherapy Section Two, Part II, Diseases of the nose. Part III, Diseases of the paranasal sinuses. Part IV Diseases of the mouth and pharynx. Part Diseases of the larynx. Part VI, Diseases of the ear Part VII, Nervous disorders: Facial paralysis. The neuralgias. Headache. Index.

Note A compact manual of the techniques of otolaryngology which can be carried out in suitably equipped offices rather than in hospitals. A rather wide range of conditions is covered. Details of minor operations, such as the removal of polyps, are included as well as non-surgical techniques such as irrigation and radiation therapy The new edition includes certain changes due to advances in the use of antibiotics. Also there is new and useful chapter on headaches. The work is adequately illustrated and there are moderately long bibliographies.

JACKSON, CHEVALIER, AND CHEVALIER L JACKSON

Diseases of the nose, throat, and ear including bronchoscopy and esophagoscopy with the collaboration of sixty four outstanding authorities 934 illustrations on 581 figures including 18 plates in color Philadelphia W B Saunders Company 1945 844 p illus. (part col d) 26 cm. $12.00 995

Contents (abridged) Part I, Nose and nasal accessory sinuses. Part II, Mouth, fauces, and pharynx. Part III, The ear Part IV Larynx and hypopharynx. Part Trachea and bronchi. Part VI, Esophagus. Part VII, Foreign bodies in the air and food passages. Part VIII, General considerations. Index.

Note: An inclusive text and reference book designed for medical students, general practitioners, and also specialists. The accepted facts and standard techniques are all presented; and, in addition, in cases where there are important alternative theories, the same subjects are covered from the different viewpoints by two or more contributors. In each division detailed exposition of anatomy and physiology precedes the discussion of abnormalities and diseases. Subjects are fully treated from the viewpoint of the practitioner. Most of the illustrations were especially prepared for the volume. The bibliographical apparatus consists of numerous short lists of references appended to the article. Material of historical significance only is not included.

KOPETZKY SAMUEL JOSEPH

Deafness tinnitus and vertigo New York Thomas Nelson and Sons 1948 313 p. illus. 24 cm. $7.50 996

Contents. Introduction. Anatomy Applied physiologic aspects of hearing. Anatomic background and applied physiology of the vestibular mechanisms. The effects on cochlear and vestibular mechanisms of certain general diseases. Lesions of the otic capsule in skeletal bone diseases and their influence on the ear mechanisms. The biochemistry of the blood and its significance in dysfunction of the cochlear and vestibular mechanisms. Tinnitus with related hearing phenomena and vertigo associated with deafness. A discussion of functional tests. Pathologic findings and criteria indicating rationally applied therapy Index.

Note: A valuable treatise in which the results of studies in fields of biochemistry not obviously related to deafness, tinnitus and vertigo, are integrated with more patent knowledge and with the author's own extensive investigations of cases in the clinic. Because of this incorporation and interpretation of unconventional material, the book is of interest to specialists as well as to general practitioners. The main emphasis is on the physiological aspects; but methods of determining the degree and type of deafness and therapeutic measures are also discussed. The diagnostic and therapeutic parts are based on systematic study of 447 cases. There are numerous references to the pertinent literature. The author is Director of the Department of Otolaryngology of the New York Polyclinic Medical School and Hospital.

MORRISON, WILLIAM WALLACE

Diseases of the ear nose and throat. New York Appleton-Century-Crofts, Inc. 1948. 772 p. illus. 24 cm. $8 50 997

Contents (abridged) Part I, General considerations: The history of the patient. Equipment for the physical examination of the ear nose and throat—anesthesia. Chemotherapy in otolaryngology Part II, The diseases of the ear. Part III, The diseases of the external nose and the nasal cavities Part IV The allergic diseases of the respiratory tract. Part The diseases of the paranasal sinuses. Part VI, Diseases of the throat. Part VII, Diseases of the larynx. Part VIII, Diseases of the trachea, bronchi, esophagus and mediastinum. Symptom index. Subject index.

Note A new work which is intended for use as textbook in medical colleges and as treatise and reference book for general medical practitioners, rather than specialists. The common diseases are discussed simply practically and in adequate detail but rare ones are dealt with briefly Typical information about disease covers the following points: definition, etiology pathology symptoms, physical signs and diagnosis, differential diagnosis, course and outcome, and treatment, both medical and surgical. However only simple surgical techniques are fully described since the more complicated surgery is beyond the skill of the general practitioner. There are 139 figures which are reproduced from drawings by the author.

WOLF, GEORGE DAVID

Ear nose and throat symptoms diagnosis treatment. 149 illustrations, including 25 with color Philadelphia J B Lippincott Company 1947 523 p illus. (part col d) 24 cm. $10.00 998

Contents Part One, The nose, throat, and larynx: Emergencies. Head pain. Vertigo. Obstructed nasal breathing. Postnasal drip. Sore throat. Obstructive dyspnea. Hoarseness. Part Two, The ear Earache. Chronic otorrhea. Impaired hearing. Marked impairment of hearing, or deafness. Tinnitus aurium Part Three, Other conditions met in otolaryngology: Swelling of the salivary glands. Excessive lacrimation. Miscellaneous complaints. Part Four Facial plastic surgery Part Five, Subjects related to otolaryngology: Bronchoscopy. Allergy Blood dyscrasias. Avitaminoses. Antibiotics. Appendix Planning and equipping an office. Index of subjects. Index of authors.

Note. A compact work designed for the guidance of general practitioners rather than for specialists or medical students. It is arranged mainly according to symptoms. Under each symptom are described the various conditions with which the symptom is associated. Acute sinusitis and tumors of the antrum, for instance, appear under obstructed nasal breathing. Diagnostic techniques are limited for the most part to those which can be carried out in the average doctor's office. Anatomy etiology and treatment are also discussed. Rather full bibliographies are appended to the chapters with the purpose of guiding the practitioner to more detailed studies of special conditions has the need arises. The author is member of the faculty of the New York Medical College

YEAR BOOK OF THE EYE EAR, NOSE AND THROAT

The 1948 Year book of the eye ear nose and throat. The eye edited by Louis Bothman. The ear nose and throat, edited by Samuel J Crowe with the collaboration of Elmer W Hagens Chicago Year Book Publishers, Inc., 1948 511 p illus. 19 cm. (The practical medicine year books) $4 75 999

Contents The eye When should cataracts be operated on? by L Bothman. The eyelids and lacrimal apparatus. The orbit and exophthalmos The conjunctiva. The cornea. The iris and ciliary body The lens and cataract. The retina. The choroid. The optic nerve. Glaucoma Refraction and muscles. Neurology and visual fields Injuries. Therapy Surgery General and miscellaneous The ear Introduction General considerations. Hearing and equilibrium. The middle ear Otosclerosis and the fenestration operation. Inner ear and intracranial connections The nose and throat Nose and sinuses Mouth, pharynx and nasopharynx Larynx and trachea. Bronchi and esophagus. Index Index to authors.

Note (2313a) An illustrated, annual review of worldwide developments in these specialties. It is similar in scope and organization to the other volumes in the series. The more significant articles which appeared in periodicals throughout the world during the year are selected and abstracts of these are prepared The abstracts are comparatively long. Some run to over one thousand words, thus it is possible for the findings in the original article to be fully described. A footnote reference is given in each instance to the original publication. Some of the abstracts are supplemented by brief notes written by the appropriate editor A generous number of illustrations (100 in the present issue) is included, and the indexes are especially full.

GASTROINTESTINAL DISEASES

ALVAREZ WALTER CLEMENT

An introduction to gastro-enterology Fourth edition revised and enlarged. With 269 Illustrations. New York Paul B Hoeber Inc., Medical Book Department of Harper & Brothers, 1948 903 p. illus 26 cm. $12.50 1000

Contents (abridged) The motor functions of the small bowel. The facultative autonomy of the digestive tract. Some theories that have been advanced to explain the polarity of the small bowel. The gradient theory of the polarization of the bowel. Ways in which gradients might conceivably be altered or reversed. The syndrome of reverse peristalsis. The muscular versus the nervous origin of the rhythmic contractions of the gut. The structure and functions of the myenteric plexuses. The extrinsic nerves of the digestive tract and their functions. Chewing and swallowing. The cardia. The movements of the stomach. Gradients in the muscular wall of the stomach. The pylorus and the duodenal cap. Hunger contractions and the pain of ulcer Movements of the stomach that is diseased or has been operated on. Vomiting. The mechanics of the gallbladder The ileocecal sphincter The movements of the colon. The length and complexity of the bowel as influenced by diet. The rate of progress of food residues through the digestive tract. Constipation. Gas in the bowel. Hunger appetite and thirst. Technical methods and apparatus. On books and reading Bibliography Index.

Note. (2314) This rather comprehensive survey has become classic in its field In an informal, lecture-room style the author discusses the significant literature and also his own experience and research at the Mayo Clinic. In preparing the present edition he selected from the literature published since the preceding edition over 400 articles and books which appeared to him to be important and incorporated brief summaries of them in his text. The work is more than 100 pages longer and contains about eighty additional illustrations. Although it is selected list, the bibliography now refers to about 2800 books and papers.

BOCKUS HENRY LE ROY

Gastro-enterology Volume III Diagnosis and treatment of disorders of the liver gallbladder biliary tract and pancreas. Intestinal parasites and secondary gastro-intestinal disorders. By Henry L Bockus and colleagues at University of Pennsylvania Graduate School of Medicine. Philadelphia W B Saunders Company 1946 1091 p. illus. (part col d) 25 cm. $15.00 1001

Contents (abridged) Section VII, The liver Anatomy and physiology of the liver by H. J Tumen. Diagnostic laboratory methods applicable to the study of liver function and disease, by H. J. Tumen. The pathogenesis and classification of jaundice, by H. J. Tumen. Ascites, by M Mensh and R. W Banks. Diseases of the hepatic blood vessels and Cruveilhier Baumgarten syndrome Specific infections of the liver—syphilis, tuberculosis and actinomycosis. Parasitic diseases of the liver and biliary tract. Cirrhosis of the liver by H. J Tumen. Perihepatitis and constrictive pericarditis, by M. Mensh and R. W Banks. Primary tumors and cysts of the liver by J E. Berk Metabolic diseases of the liver by H. L. Bockus and J F Monaghan. Section VIII, Affections of the gallbladder and bile ducts: Anatomy and physiology of the gallbladder and bile ducts, by M. M. Rothman. Diagnostic procedures in the study of affections of the gallbladder and bile ducts. Acute cholecystitis, by J. E. Berk Cholelithiasis, by H. L. Bockus and D L. Dand. Tumors of the gallbladder and bile ducts. Choledocholithiasis, by J E. Berk Biliary fistulae—rupture of bile ducts with free peritonitis. Section IX, Affections of the pancreas: Embryology anatomy and physiology of the pancreas, by D L. Dand and H. L. Bockus. Diagnostic methods applicable to the study of pancreatic function and disease, by D L. Dand and H. L. Bockus. Acute pancreatitis, pancreatic injuries and pancreatic fistula, by D. L.

Dodd and H. L. Bockus. Tumors and cysts of the pancreas, by J. E. Berk. Section x, Gastro-intestinal parasites: Animal parasites found in the gastro-intestinal tract of man by M. M. Kelhouse. Section xi, Secondary affections of the gastro-intestinal tract and miscellany: Functional disorders of the gastro-intestinal tract of neuropsychiatric origin, by J. C. Yaskin. Gastro-intestinal allergy by M. M. Miller. The interrelationship of cardiac and gastro-intestinal disorders, by S. Bellet and W. D. Stroud. Digestive tract symptoms secondary to genito-urinary disease by J. F. Prend. Splenomegaly—classification of causes and differential diagnosis, by T. A. Johnson. Food poisoning, by H. Walter Jr. Appendix. Index.

—— General index by Henry L. Bockus and colleagues at University of Pennsylvania Graduate School of Medicine. Philadelphia W B Saunders Company 1946 101 p 25 cm.

Note: (1318) Volume III, together with the *General index*, completes this valuable treatise on the diseases of the gastrointestinal tract. As in the first two volumes, the emphasis is on medical aspects. Actual surgery is not covered but indications for operative treatment and pre- and post-operative management are discussed. A somewhat larger proportion of this volume has been written by the author's colleagues, but nineteen of the chapters in it were written by him jointly or solely. The vast scope of the work is indicated by the fact that the separate *General index* runs to 101 pages of small type.

BROWN, RALPH C

Ulcer of the stomach, duodenum and jejunum. Edited by Henry A. Christian. Reprinted from Oxford loose-leaf medicine with the same page numbers as in that work. New York Oxford University Press 1946 53 p. illus. 24 cm. (Oxford medical publications) $2.25 1002

Contents (abridged) Etiology Pathogenesis. Symptoms. Diagnosis. Differential diagnosis. Treatment Prevention of recurrence. Bibliography

Note: Essentially a practical summary for the guidance of general practitioners of medicine rather than for surgeons and specialists. The pathological anatomy, symptoms, diagnosis and treatment are discussed in fair detail, but the discussion of surgical treatment occupies only three pages. The chief value of the work lies in its expertly written directions for diagnosis and medical methods of treatment. The author was for many years director of the Clinic of Gastrointestinal Diseases at the Presbyterian Hospital, Chicago.

CANTOR, ALFRED JOSEPH

Ambulatory proctology With a foreword by Beaumont S Cornell. New York Paul B Hoeber Inc., Medical Book Department of Harper & Brothers, 1946 524 p illus. 24 cm. $8.50 1003

Contents (abridged) Clinical anatomy Diagnosis Anesthesia and analgesia. Pediatric proctology Cryptitis and papillitis Anorectal fistula. Perianal and perirectal abscesses and infections. Anal ulcer. Hemorrhoids. Prolapse and procidentia Enterocolitis and colitis. Bacillary dysentery Tuberculosis. Venereal diseases Intestinal parasites. Constipation Diverticulosis and diverticulitis Benign tumors. Malignant neoplasms Pilonidal dimple, sinus, cyst, and abscess. Coccygodynia. Rectal stricture and anal stenosis. Anal incontinence. Foreign bodies and rectal trauma Electrosurgical technique. Index

Note. By "ambulatory proctology" the author of this book designates the diagnosis and treatment of diseases of the anus, rectum, and sigmoid bowel by techniques which do not confine the patient to bed. As the contents indicate, an extensive range of proctological disorders is covered. The text is divided about equally between conditions which can be treated by surgical methods in the doctor's office and conditions which can be treated medically. Also there is considerable material on conditions which can be diagnosed in the office but require hospitalization for treatment. The book is addressed particularly to general practitioners, but some of the material it contains may be of interest to specialists—particularly men who are just beginning to practice in this field. There are about 180 illustrations and a series of good bibliographies.

FRADKIN, WILLIAM ZEV

The diagnosis and treatment of diarrheal diseases. New York Grune & Stratton Inc., 1947 254 p illus. 23 cm. $6 00 1004

Contents (abridged) General considerations: The diarrhea problem. Anatomic and physiologic considerations. Bacteriology and pathology Etiologic classification of diarrheal diseases. Diagnostic procedures. Complications of diarrheal diseases. General treatment and prevention of diarrheal diseases. Specific diarrheal diseases: Diarrhea caused by Protozoa. Diarrhea caused by bacteria. Diarrhea caused by regional enteritis. Diarrhea caused by idiopathic or nonspecific chronic ulcerative colitis. Diarrhea caused by mechanical factors. Allergic diarrhea. Psychogenic diarrhea. Vitamin deficiency diarrhea. Diarrhea caused by intestinal worms. Glandular diarrhea. Diarrhea caused by metal poisoning, chemicals and deep X-ray therapy Diarrheas of infants and children. Index.

Note The author brings together here all of the important information that is now available on diarrhea in its various forms, including the laboratory and clinical aspects, diagnostic problems, and the therapeutics involved. Photographs, photomicrographs, roentgenograms, and drawings supplement the text. Chapter bibliographies are provided for readers requiring further amplification. The work is written for the medical practitioners and students. The author is a staff member of the Jewish Hospital of Brooklyn.

HELD I. W AND A. ALLEN GOLDBLOOM

Peptic ulcer its diagnosis and treatment. Springfield, Ill. Charles C Thomas, 1946. 382 p illus (part col d) 24 cm. $6.50 1005

Contents (abridged) Part I, Simple peptic ulcer: Pathogenesis. Pathology Symptoms Roentgenologic diagnosis of simple ulcer Laboratory findings other than X-ray Differential diagnosis. Medical treatment of simple peptic ulcer Peptic ulcer in childhood. Ulcer of the esophagus. Peptic ulcer of Meckel's diverticulum. Gastric catarrh (gastritis) The "dyspeptic soldier"—functional (military) dyspepsia. Part II, Peptic ulcer with complications: Perforated peptic ulcer. Active gastric hemorrhage. Callous ulcer Gastric motor insufficiency (stenosis) Carcinomatous degeneration of peptic ulcer Indications for surgical treatment. Post-operative management. Subject index.

Note. Written by two specialists in internal medicine, this book is designed for medical students, military physicians, and general practitioners rather than surgeons. Diagnosis, the constitutional factor in etiology and non-surgical methods of treatment are stressed. Post-operative care of patients who require surgery is also covered. In some sections the text includes extensive synopses of other authors' work but for the most part it describes well-established current practices from the viewpoint of the authors' own professional experiences. Well selected bibliographies are appended to most of the chapters. Most of the 110 illustrations are reproductions of roentgenograms.

JOHNSON THOMAS A., editor

Management of common gastro-intestinal diseases. Sixteen figures and 4 charts. Philadelphia J B Lippincott Company 1948 280 p. illus. 24 cm. (The American practitioner series) $7 00 1006

Contents. Chronic gastritis, by R. Schindler and O. Blomquist. The recognition of gastric malignancy by J R. Kinner and W L. Palmer. Diagnosis and medical management of benign gastric ulcer by S. M. Jordan. The management of bleeding peptic ulcer by A F R. Andresen. The present status of "enterogastrone" in the therapy of peptic ulcer by A. C. Ivy and M. I. Grossman. The hyperalimentation treatment of intractable peptic ulcers with hydrolysates, by Co Tui, N Hababayan and K. Garcia. Psychosomatic aspects of gastro-intestinal disorders, by E. Weiss. Present status of therapy of regional enteritis, by B. B. Crohn and H. Yarnis. The diagnosis of pancreatic disease by means of determinations of serum lipase and serum amylase, by T A. Johnson. The diagnosis of carcinoma of the pancreas, by J. E. Berk. Cirrhosis of the liver by H. J Tumen. Diagnosis and management of viral hepatitis, by W P Havens, Jr. Diagnosis and management of distal ulcerative colitis, by T A. Johnson. The diagnosis and treatment of irritable colon, by E. M. Collins. Carcinoma of the colon, by A. H. Aaron and E. Milch. The differential diagnosis and treatment of amebiasis and its complications, by E. T Berowitz. Index.

Note: A presentation of standard and recent developments and techniques. It is intended for general practitioners rather than specialists and is a supplement rather than a substitute for more comprehensive texts. The various chapters constitute essentially

symposium, and comprehensive review of stomach and intestinal diseases has not been attempted. Instead, each author summarizes his knowledge and findings for special phase of this broad subject. Throughout the book emphasis is placed on symptoms and on methods of diagnosis and treatment. All but two of the papers have bibliography and there is comprehensive index.

JOSIAH MACY JR FOUNDATION

Liver injury Sixth conference May 1 and 2, 1947 New York, N Y Edited by F W Hoffbauer New York Josiah Macy Jr Foundation, 1947 74 p illus. 23 cm. Paper $2 00 1007

Contents: Section I, Cirrhosis Report of pathologists on cirrhosis study by H. Goldblatt. Summary of Section I, by W B Hawkins. Section II, The hepatorenal syndrome Water storage in acute hepatitis, by D H. Labby Hepatorenal vasotropic factors in experimental cirrhosis, by E Shorr Renal hemorrhagic degeneration, by W H. Griffith Some histological aspects of renal and hepatic scheliopathy by W S. Hartroft. Summary of Section II, by J L. Bollman. Section III, Chromatography in the study of liver disease. Chromatographic studies, by C. E. Dent. Microbiological studies of urinary excretion of amino acids, by P Gyorgy Section IV Massive hepatic necrosis Relation of dietary factors to liver injury by P Gyorgy Derangements of the hepatic circulation in disease, by H. P Himsworth.

—— Liver injury Seventh conference, January 15 and 16, 1948 New York, N Y Edited by F W Hoffbauer New York Josiah Macy Jr Foundation, 1948 95 p illus. 23 cm. Paper $1 50 1008

Contents: Section I, Radioactive methionine Section II, Studies of protein formation Methionine as an indicator of protein formation, by H Tarver Urinary excretion of radioactive sulfur by P. Gyorgy Section III, Portal hypertension Experimental methods of altering hepatic circulation by J L. Bollman Factors influencing pressure in the portal vein by F W Hoffbauer The portal-caval shunt for the correction of portal hypertension, by A. H. Blakemore. Portal hypertension, by R. R. Linton. Section IV Hepatic blood flow Effect of posture and exercise on liver blood flow by S. Bradley Section Effect of plutonium on the liver The effects of plutonium on the liver by A M. Brues. Section VI, Liver cell regeneration The use of vital staining in the study of liver injury and repair by W Lane Williams. The natural tendency of tissues to participate in process of repair following injury and to establish some order of functional value, by W deB MacNider Section VII, Hepatic secretory functions Studies of fluorescein excretion by the liver under normal and abnormal conditions, by A. L. Grafflin. Excretion of glucuronates after ingestion of benzoic acid or cinnamic acid as test of liver function, by I. Snapper. Urinary excretion of porphyrin in liver disease, by C. J Watson Section VIII, Serum lipids in liver disease Turbidimetric studies of serum lipids in liver disease, by H. G. Kunkel

Note The papers and discussions collected in these volumes constitute the transactions of the conferences. The papers are short, rather informal and their total effect is more that of symposium than formal meeting. The series is of interest to biochemists and medical specialists.

MOVITT ELI RODIN

Jaundice its pathogenesis and differential diagnosis. New York Oxford University Press 1947 261 p illus. (part col d) 24 cm. (Oxford medical publications) $6 50 1009

Contents: Part The anatomy of the liver and the biliary tract. The physiology of the liver The metabolism of the bile pigment. The pathogenesis of jaundice. Diagnostic procedures. Differential diagnosis of jaundice—general principles. Part Hemolytic jaundice. Parenchymatous jaundice—acute and subacute hepatitis. Parenchymatous jaundice—chronic hepatitis—cirrhosis Obstructive jaundice Appendix Index

Note In this excellent work the current knowledge of jaundice is surveyed for specialists in gastroenterology and for general practitioners of medicine The author is especially interested in facilitating differential diagnosis so that unnecessary operations for stone will be avoided. He describes the various pathological conditions that give rise to jaundice summarizes variety of laboratory tests which are useful in diagnosis, and gives references to articles in which there are fuller descriptions. In the end, however he admits that there are some cases in which an accurate differential diagnosis between an obstructive and nonobstructive type of jaundice can not be made. There are thirty tables and about twenty-five illustrations.

PELNER, LOUIS, AND OTHERS

Gastroenterology in general practice, by Louis Pelner with the collaboration of Louis A. Held and contributions from Alexander Lewitan Samuel Waldman and Siegfried W Westing. Springfield, Ill Charles C Thomas, 1946 285 p illus. (part col d) 26 cm. $7.50 1010

Contents (abridged) Gastro-intestinal history taking. Peptic ulcer Special methods for the relief of pain in some cases of peptic ulcer by Louis Pelner and Samuel Waldman. Gastric carcinoma. Classification of the diarrheas. The irritable colon. Ulcerative colitis Carcinoma of the colon and rectum. The sprue group of diseases. Meckel' diverticulum. "Chronic appendicitis"—a misnomer for recurrent appendicitis. Food poisoning. Gastro-intestinal allergy The medical treatment of jaundice. Cirrhosis of the liver by S. Waldman. Hyperinsulinism—a disease to be considered in the differential diagnosis of abdominal pain. Aids in the diagnosis of pancreatic disease. Gallbladder disease. The place of the mucosa study and of the double contrast method in the X-ray examination of the stomach and colon by Siegfried W Westing. Compression radiography and the diagnosis of gastric and duodenal ulcer by A. Lewitan. Vitamins in gastro-intestinal disease. Gastro-intestinal symptoms in heart disease, by S. Waldman. Psychosomatic symptoms in gastro-intestinal disease. Psychosomatic case records. Methods of treatment of psychosomatic symptoms applicable to the general practitioner Pre-operative and post-operative nutritive requirements. Index.

Note An essentially practical book for everyday reference use by the general medical practitioner With emphasis upon facts, many of which are presented in tabular form, the authors discuss the etiology symptomatology diagnosis, and modern treatment of the common diseases and disorders of the gastrointestinal tract. The volume is well illustrated, and 70 of the 108 figures are in color Lists of suggested readings enable the physician to readily locate fuller treatments of particular topics.

SCHIFF LEON

The differential diagnosis of jaundice. Chicago The Year Book Publishers Inc., 1946. 313 p illus. (part col d) 21 cm. $5 50 1011

Contents (abridged) Part One, Introduction Characteristics and classification of jaundice. Part Two, Parenchymal jaundice Infectious hepatitis (catarrhal jaundice) Homologous serum hepatitis (homologous serum jaundice) Jaundice due to chemicals and systemic infections. Acute yellow atrophy of the liver Chronic hepatitis (cirrhosis) Part Three, Neoplastic jaundice Carcinoma of the pancreas. Carcinoma of the ampulla of Vater Carcinoma of the gallbladder Primary carcinoma of the liver Part Four Calculous jaundice. Part Five, Retention jaundice. Part Six, Jaundice of the neonatal period. Physiologic jaundice. Congenital atresia of the bile ducts. Jaundice with obstructed biliary passages. Differential diagnosis of jaundice in infancy Part Seven Clinical and laboratory aids in differential diagnosis of jaundice. Roentgen examination. Liver biopsy Part Eight, Appendix Laboratory methods. Index.

Note The purpose of this useful work is to prepare medical students and practitioners for making rapid and accurate diagnoses of the diseases and disorders that give rise to jaundice. Data are given on the frequency of the various disorders and both classical and unusual symptoms are described in detail. The useful literature is carefully keyed to the text and cited in footnote references. The titles of the separate articles are included in the references. The section on laboratory methods describes detailed procedures.

SCHINDLER, RUDOLF

Gastritis. New York Grune & Stratton, 1947 462 p illus. 23 cm. $10 00 1012

Contents Introduction History of gastritis. Definitions. Pathologic part Methods and material used. Classification of gastritis. The normal histology of the stomach. Histopathology Gross pathology Clinical part. Acute simple exogenous gastritis. Acute corrosive gastritis Acute hematogenous gastritis. Acute phlegmonous gastritis. The clinical picture of chronic idiopathic gastritis. Gastritis of the postoperative stomach. Concomitant diseases and sequelae. Gastritis in military medicine. Summary of 11 selected cases. Bibliography Plates and Illustrations. Indexes.

Note In this monograph the author who is Clinical Professor of Internal Medicine at the College of Medical Evangelists, Los

Angeles, and specialist in gastroenterology has reviewed and cited the pertinent literature but has based his conclusions on his own experience which includes the examination of more than 2,500 cases of uncomplicated gastritis. He describes the histology and gross pathology of the stomach in various stages of inflammation and discusses symptoms, diagnosis, and methods of treatment not involving surgery As further aid to practitioners and students he includes photomicrographs of normal and diseased stomach sections. The 17-page selected bibliography is keyed to the textual material.

SPIESMAN MANUEL GEORGE

Essentials of clinical proctology Foreword by Anthony Bassler New York Grune & Stratton 1946 238 p illus. (part col'd) 22 cm. $4 75 1013

Contents (abridged) Embryology and applied anatomy of the anorectum. Congenital malformations of the anorectum. Examination and instrumentation. Stool analysis. Preoperative and postoperative care. Treatment of complications. Anesthesia for anorectal operations. The pecten, the pecten band, pectenosis and pectenotomy Hemorrhoids. Prolapse of the anus, rectum, and sigmoid. Malignancies of the anus, rectum, and rectosigmoid. Venereal diseases of the anorectum. Tuberculosis of the anus, rectum and colon. Constipation. Differential diagnosis of common anorectal conditions. Solutions and diets in proctologic work

Note: A very concise, practical manual that is suitable chiefly for general practitioners of medicine. There are thirty-nine chapters in all, and the typical chapter defines and describes specific disease, then discusses briefly incidence, etiology pathology symptoms, diagnosis, and treatment, including simple surgical procedures.

METABOLIC, NUTRITIONAL AND ENDOCRINE DISEASES

ALBRIGHT, FULLER, AND EDWARD C REIFENSTEIN JR.

The parathyroid glands and metabolic bone disease selected studies Baltimore The Williams & Wilkins Company 1948 393 p illus. 23 cm. $8.00 1014

Contents The parathyroid glands—normal and pathologic physiology Clinical hypoparathyroidism. Clinical hyperparathyroidism. Mode of action of vitamin D and dihydrotachysterol Metabolic bone disease—general considerations. Metabolic bone disease—osteoporosis. Metabolic bone disease—osteomalacia. Polyostotic fibrous dysplasia (osteitis fibrosa disseminata) Paget's disease (osteitis deformans) Appendix. Bibliography Author index. Subject index

Note As yardstick for their selection of the studies summarized in this book, the authors have used the experience which they accumulated during their twenty-four years association with the Massachusetts General Hospital. The importance of the book lies mainly in its treatment of the subject from the viewpoint of differential diagnosis and its exhaustive documentation and discussion of the underlying hypotheses. Roentgenograms, photomicrographs, charts and diagrams, along with tables and case histories, form substantial part of the evidence. There are twenty-one pages of bibliography and fifty-four pages of subject index. Information pertaining to test techniques is contained in the appendix.

COLLENS WILLIAM S AND LOUIS C BOAS

The modern treatment of diabetes mellitus including practical procedures and precautionary measures Springfield, Ill. Charles C Thomas, 1946 514 p. illus (part col d) 24 cm. $9 50 1015

Contents (abridged) Historical introduction. The diagnostic aspects of diabetes The diet in diabetes Therapeutic classification of diabetes. The obese mild diabetic The mild diabetic of normal weight. The undernourished mild diabetic. Insulin. Hypoglycemia. The diabetic of moderate severity The severe diabetic without ketosis. The severe diabetic with ketosis (compensated acidosis) The diabetic with uncompensated acidosis impending coma and coma. The juvenile diabetic The complications of diabetes. Degenerative disease of the coronary arteries—the heart in diabetes. Degenerative disease of the peripheral arteries—arteriosclerosis obliterans. Degenerative disease of the cerebral and renal arteries. The eye in diabetes. Avitaminosis in diabetes. Infections peculiar to diabetes. Coincidental diseases requiring special diets The surgical diabetic. The pregnant diabetic. Technique of insulin administration (Illustrated) Technique of the urine examination. Technique of blood chemistry (Illustrated) Appendix. Index.

Note A practical work designed primarily for the information and guidance of the general practitioner It is based on the authors' experience in several large Brooklyn hospitals and in private practice and it deals entirely with the therapeutic and clinical aspects of diabetes and its complications. No attempt is made to cover thoroughly the etiology pathology or symptomatology of the disease. Throughout the book particular attention is given to methods of calculating and writing diets for diabetics.

COLWELL, ARTHUR RALPH

Diabetes mellitus in general practice Chicago The Year Book Publishers, Inc., 1947 350 p illus. 21 cm. (The general practice manuals) $5 75 1016

Contents General characteristics of diabetes mellitus. Diagnosis. Treatment in general. Treatment by diet. Insulin and its modifications. Treatment with insulin. Acute complications and their treatment. Chronic complications and their treatment. Index.

Note: This compact office manual aims to provide the best in contemporary knowledge regarding the diagnosis and treatment of diabetes. With its aid the physician lacking experience with the disease can readily orientate himself in sound therapeutic methods. The data presented here represent an organized review of the author's twenty-five years' experience in treating diabetic patients, in studying and teaching the relevant literature, and in experimenting in laboratories and wards to prove or disprove new concepts and methods. References are given at the end of each chapter

DUNCAN, GARFIELD GEORGE, editor

Diseases of metabolism detailed methods of diagnosis and treatment a text for the practitioner Second edition illustrated. Philadelphia W B Saunders Company 1947 1045 p illus. 25 cm. $14.50 1017

Contents (abridged) Carbohydrate metabolism, by C. N H. Long. Protein metabolism, by A. White. Lipid metabolism, by A. White. Mineral metabolism, by A. Cantarow Water balance in health and disease, by J. P Peters. Nutritional and metabolic aspects of disorders of the blood, by L. M. Tocantins. Vitamins and avitaminoses, by T D. Spies and H. R. Butt. Undernutrition, by L. H. Newburgh and W D Robinson. Obesity by F A. Evans. Xanthomatoses, glycogen disease, and disturbances of intermediary metabolism, by E. Mason. Gout, by W Bauer and Friedrich Klemperer. Hyperinsulinism, by G. G. Duncan. Diabetes insipidus, by G. G. Duncan. Melituria, by A. Cantarow Diabetes mellitus, by G. G. Duncan Disorders of the thyroid gland, by A. W Winkler. Diseases of the kidney by M. Miller and J. H. Hayman, Jr. Appendix. Index.

Note (2390) Each topic in this comprehensive review of the fundamentals and disturbances of metabolism has been prepared by an authority in the field. The volume is intended to provide the physician with basis for the understanding, diagnosis, and treatment of metabolic diseases As in the previous edition, fundamentals are discussed in the light of recent investigations, with clinical considerations presented in some detail. New knowledge regarding the part played by proteins in wound healing, alterations in fluid balance, and the importance of vitamins has been incorporated into the original material. Two new chapters on the thyroid glands and disorders of the kidneys have also been added. The extensive chapter bibliographies, which are limited to important and comprehensive works, have been brought up to date.

ENDOCRINOLOGY OF NEOPLASTIC DISEASES a symposium by eighteen authors New York Oxford University Press 1947 392 p illus. 24 cm. (Oxford medical publications Gray H. Twombly and George T Pack, editors) $11.00 1018

Contents. Introduction, by G. H. Twombly and G. T Pack. Tumors in experimental animals receiving steroid hormones, by W U Gardner. Experimental investigations concerning the role of the pituitary in tumorigenesis, by H. Selye. The endocrine effects of pituitary tumors, by W J German. Ovarian tumors with sex hormone function, by E. Novak. Endocrine factors in the origin of

tumors of the uterus, by H. C. Taylor Jr. The relationship of hormones to diseases of the breast, by L. T. Nathanson. The effect of sex hormones on skeletal metastases from breast cancer by J. H. Farrow. Benign hypertrophy and carcinoma of the prostate, by R. A. Moore. The endocrine treatment of cancers of the prostate gland, by A. L. Dean, H. Q. Woodard and G. H. Twombly. The relationship of hormones to testicular tumors, by G. H. Twombly. Adrenal cortical tumors—physiologic considerations, by A. T. Kenyon. Hormonal tumors of the adrenal, by G. F. Cahill. The endocrine activity of thyroid tumors and the influence of the *thyroid hormone* on tumors in general, by J. Lerman. The endocrine aspect of enlargements of the parathyroid glands, by O. Cope. Hyperinsulinism in relation to pancreatic tumors, by A. O. Whipple. The endocrinologic aspects of tumors of the pineal gland, by L. M. Davidoff.

Note Originally the articles in this book appeared in the July and August, 1944 issues of *Surgery*. In preparing them for the book, they were revised so as to bring them up to date as of 1946. Each of the articles surveys the current knowledge of the special topic mentioned in its title. In all cases, the pertinent literature has been *taken into account and is fully cited. In most cases, some of the* work of the author of the paper is also described. The bibliographies appended to the papers are extensive and in some cases include titles of papers that were still unpublished when the book was prepared. Much information is included in the various papers on *the important problem of possible carcinogenic effects of hormones* which are administered for the relief of other diseases.

FOLLIS, RICHARD HOLDEN JR.

The pathology of nutritional disease physiological and morphological changes which result from deficiencies of the essential elements amino acids, vitamins and fatty acids. Springfield Ill. Charles C Thomas, 1948 291 p. illus 26 cm. $7.50 1019

Contents Dietary deficiencies in general. The essential elements. The essential amino acids. The fat and water soluble vitamins. The essential fatty acids. The pathologic anatomy of specific tissues; transplantation and comparison. Bibliography. Author index. Subject index.

Note A compact and useful summary of the modern knowledge of the relationship between nutritional deficiencies and physiological and morphological changes in mammals. Approximately forty substances are considered, ranging from the simple chemical elements, such as iron, to the complex vitamins and amino acids. Most of the information presented was derived from experiments on laboratory animals but statements about what is known, if anything, on the results of deficiencies in the diet of man are included in the discussion of each substance. The bibliography is selective and runs to nearly 800 references. There are about seventy illustrations. The work is addressed to research workers in nutrition and biochemistry.

FRIEDGOOD HARRY B

Endocrine function of the hypophysis Edited by Henry A. Christian. Reprinted from Oxford loose-leaf medicine with the same page numbers as in that work. New York Oxford University Press 1946 211 p illus. 24 cm. (Oxford medical publications) $4.50 1020

Contents (abridged) Part Anatomy embryology and phylogeny of the hypophysis cerebri. Clinical aspects of the anatomy and embryology of the hypophysis cerebri. Clinical interpretation of phylogenetic data. Bibliography. Part Cytophysiology and biochemistry of the adenohypophysis. The gonadotropic hormones. The thyrotropic hormone. The ophthalmotropic activity of the adenohypophysis and its bearing on the clinical syndrome of exophthalmic goiter. The carbohydrate regulating mechanism of the adenohypophysis. The adrenocorticotropic hormone. Bibliography. Part III, Biological biochemical, physiological and genetic concepts of growth. The rhythmic progress of normal growth in children. Factors affecting growth. Nature of the growth-regulating influence of the adenohypophysis. Bibliography. Part IV Clinical disorders of growth. Acromegaly. Gigantism. Dwarfism. Bibliography. Part Cytophysiology biochemistry and pharmacology of the neurohypophysis. Pharmacology and methods of assay of the neurohypophyseal principles. Physiology of the neurohypophyseal principles. Bibliography.

Note This small volume intended as guide in the clinical application of the existing literature on the subject matter. It clarifies the anatomical and embryologic concepts of the hypophysis with the aid of schematic drawings and explains the chemistry and physiology of the adenohypophyseal hormones. Parts III and IV are devoted to the concept and anomalies of growth, while Part deals briefly with the neurohypophysis in its various aspects. The book is well arranged, concise, and clearly written. The extensive bibliographies at the end of each section are valuable addition to the text.

GREENBLATT, ROBERT BENJAMIN

Office endocrinology with a foreword by G Lombard Kelly Third edition Springfield, Ill. Charles C Thomas, 1947 303 p. illus. (part col d) 23 cm. $4 75 1021

Contents (abridged) Foreword, by Dr G. Lombard Kelly Part 1 The regulatory mechanisms of the endocrine system. Part 2, Female endocrinology: Physiology of menstruation and the menstrual cycle. The mechanism of uterine bleeding. The vaginal smear. Diagnostic curettage. The correlation of basal temperature and ovarian activity. Disorders of micturition due to endocrine imbalance. The climacteric. The management of sterility. Threatened and habitual abortion. Nausea and vomiting of endocrine origin. The influence of the glands of internal secretion on the breast. Obesity. Endocrine headaches. Sexual libido in the female. Sexual infantilism in the female. Hirsutism. Part 3 Hormonology: Estrogens. Progesterone. Androgens. Pellet implantation. Part 4 Male endocrinology: Hypogonadism. Cryptorchism. Male sterility and impotence. Estrogen therapy in the male. Index.

Note (2352) A standard, concise treatment which is primarily designed for office use by physicians who are not specialists in endocrinology but who do require knowledge of the commoner manifestations of endocrinological malfunction in their regular practice. Such topics as are named in the contents given above are discussed from the standpoint of their diagnosis and treatment in general practice. Diagnostic techniques and therapies available to the general physician, working with limited laboratory facilities or none at all, are described explicitly. The work has been considerably enlarged in this edition, and much important new information has been added.

HAMBLEN EDWIN CROWELL

Endocrinology of woman. Springfield, Ill. Charles C Thomas, 1945 571 p illus. (part col d) 26 cm. $10.50 1022

Contents (abridged) Part One, The endocrine glands: their history embryology anomalies, anatomy histology, secretory control, chemistry physiology and interrelations. Part Two, Applied endocrine physiology: antenatal growth and sexual differentiation, childhood development, sexual maturation, sexual maturity (menstruation, conception, gestation) and sexual regression. Part Three, Endocrine diagnostic methods History and general examination. Histopathologic and bacteriologic methods. Blood and urine chemistry Metabolic and tolerance studies. Hormonal methods. Roentgenologic data. Part Four Functional disorders of the endocrine glands: Thyroid diseases. Adrenal diseases. Pancreatic diseases. Parathyroid diseases. Ovarian diseases. Pituitary diseases. Pineal diseases. Thymic diseases. Part Five, Endocrinology applied to gynecologic diseases: Abnormal skeletal growth. Abnormal sexual differentiation. Obesity and leanness. Abnormal uterine bleeding. Dysmenorrhea. Dermatologic abnormalities. 'Menstrual headache' and other cyclic syndromes. Sterility Tumorigenesis. Complications of the climacteric. Commercial endocrine preparations. Index.

Note. A comprehensive treatment from the clinical viewpoint. In the chapters on diseases the following aspects are, in general, covered for each disease: definition, incidence etiology pathology clinical course, diagnosis, and treatment. Despite the title, the book is not strictly limited to *female* endocrinology Part One contains chapter on testes, and the three chapters on sterility in the final part cover both the male and female aspects. There are 157 figures in black-and-white, and four plates in color. The literature of the subject is cited in numerous footnote references and in reference lists appended to the chapters. The work is intended to supersede the author's earlier *Endocrine gynecology*.

JACKSON HENRY JR. AND FREDERIC PARKER, JR.

Hodgkin s disease and allied disorders. New York Oxford University Press 1947 177 p illus. 29 cm. (Oxford medical publications) $6.50 1023

Contents: Hodgkin's disease. Reticulum-cell sarcoma. Lymphocytoma and lymphoblastoma. Lymphosarcoma. Giant follicle lymphoma. Plasmocytoma. Endothelioma. Index.

Note: The brief monograph covers a group of pathologic conditions usually—and in the authors' opinion wrongly—denoted as "lymphomas." To avoid confusion, no general term has been used for the various diseases discussed in separate chapters, despite their obvious relationship. A new term, "Hodgkin's paragranuloma," was introduced to designate a condition which often precedes "Hodgkin's granuloma." The importance to differentiate between these two and the third type, Hodgkin's sarcoma, is especially emphasized. Two-thirds of the book deals with Hodgkin's disease the rest being devoted to a brief discussion of the "allied diseases," as listed in the Table of Contents. Illustrative cases, selected bibliographical references, and a few microphotographs or X-ray pictures are given for each type of disease under consideration. In spite of the existence of an extensive literature on the subject, this new attempt to bring more light into the clinical picture pathology and prognosis of the discussed conditions must be considered a valuable contribution.

JOSLIN, ELLIOTT PROCTOR

Diabetic manual for the doctor and patient. Eighth edition, illustrated. Philadelphia Lea & Febiger 1948 260 p 20 cm. illus. (part col'd) $2.50 1024

Contents: Diabetes. The recent improvement in diabetic treatment. The story of diabetes and insulin. Questions and answers for diabetic patients. A short course in diabetes. Diabetic arithmetic. Efficiency in visits to a doctor. Hygiene for the diabetic. The diet of normal individuals. The diet of diabetic individuals. The treatment of Diabetic Acid intoxication. The differences between diabetic coma and insulin reactions. Care of the teeth, revised by H. A. Kent. Gangrene. Surgery in diabetes. Constipation and diarrhea. Expectation of life. The prevention of diabetes. Heredity. The marriage of diabetics. Weight peculiarities. Diabetic costs. An insulin syringe. Dogs, diabetics and their friends. Diabetic children. Foods and their composition. Selected laboratory tests useful in diabetic treatment. What can you do to help yourself and other diabetics and to conquer the disease? New modified protamine zinc insulin. Index.

Note: (1354) A brief, authoritative handbook which is written in language understandable by laymen. Its primary purpose is to give diabetic patients the information they need about the disease and its treatment in order to live normal and useful lives; but it is useful, also, to general practitioners of medicine as a concise statement of essential information. For patients, it clarifies the doctor's instructions, simplifies diet calculations, and describes the techniques of administering insulin. In this edition the work has been revised so as to incorporate new developments up to about the middle of 1948, particularly the use of modified protamine zinc insulin.

JOSLIN ELLIOTT PROCTOR AND OTHERS

The treatment of diabetes mellitus by Elliott P Joslin Howard F Root, Priscilla White, Alexander Marble, and C. Cabell Bailey Eighth edition thoroughly revised. Philadelphia Lea & Febiger 1946 861 p. illus. (part col d) 24 cm. $10.00 1025

Contents (abridged): The incidence of diabetes. The etiology and prevention of diabetes. The physiology of diabetes. Alloxan diabetes. The pathology and causes of death in diabetes. The diet in health and diabetes. The treatment of diabetes. Hypoglycemia due to insulin. Hyperinsulinism. Diabetic coma. Allergy and diabetes. Cardio-renal-vascular disease. Infections in diabetes. The digestive system in diabetes. The nervous system and diabetes. The genito-urinary system in diabetes. Disorders of the skin in diabetes. Blood complications in diabetes. Tuberculosis. Syphilis and diabetes. Surgery and diabetes. Clinical disorders of the glands of internal secretion complicating diabetes. Diabetes in childhood. Pregnancy complicating diabetes. Non-diabetic glycosuria. Foods and their composition. Appendix: Height and weight tables. Index.

Note: (2117) An exhaustive text and reference book, valuable both to general practitioners who take care of their own diabetic patients and to specialists. At the time of preparation of this edition, the author and his associates had treated about twenty-nine thousand diabetics and glycosurics over a period of forty-eight years. The book is based primarily on this experience but the experience of other specialists has been drawn upon, and there is considerable citation of the literature. In the present edition the work is about 70 pages longer than in the previous edition. A chapter has been added on alloxan diabetes, and there are important changes in such chapters as those on cardiovascular disease, cardiorenal vascular disease, the genito-urinary system, and on blood complications. The useful statistical tables have been revised.

LEJWA ARTHUR, editor

Nutritional anemia. Cincinnati Ohio The Robert Gould Research Foundation, Inc., 1948 194 p illus 23 cm. (Symposia on Nutrition of The Robert Gould Research Foundation. Vol. 1) $2 75 1026

Contents: Introductory remarks, by E. V McCollum. Physiological implications of the anemic state, by Maxwell M. Wintrobe. The physiology of folic acid, by C. A. Elvehjem. The treatment of nutritional anemias with folic acid, by William J. Darby. The syndrome of megaloblastic anemia in infancy by Wolf W Zuelzer. Some biochemical aspects of metabolism of iron and copper by M. O. Schultze. Studies on the iron-binding capacity of serum, by G. E. Cartwright. Iron metabolism and hypochromic anemia, by Carl V Moore. Hypoferric anemia in infancy by George M. Guest. The vitamin B complex and anemia, by W H. Sebrell. Vitamin C and anemia, by Richard W Vilter

Note: This volume is made up of papers prepared for the Symposium on Nutritional Anemia organized by The Robert Gould Research Foundation and held in Cincinnati October 16–18, 1947, under the auspices of the College of Medicine of the University of Cincinnati. The program was prepared in collaboration with members of the Scientific Advisory Committee of the Foundation, eleven specialists being invited to present various aspects of their particular fields of research.

SEVRINGHAUS, ELMER LOUIS

Endocrine therapy in general practice. Sixth edition. Chicago Ill. The Year Book Publishers Inc. 1948 264 p illus 21 cm. (The general practice manuals) $5 00 1027

Contents: The biologic significance of hormones. Systematic endocrinology. The posterior pituitary. The anterior pituitary group. Growth factor. Thyroid. Parathyroids. Mammary glands. Pancreas. Diabetes mellitus. Adrenals. Ovaries. Testes. Endocrinopathies in children and adolescents. Obesity. Index.

Note: (2180) A brief practical guide to the diagnosis and therapy of diseases arising from disorders of the glands of internal secretion. The work is confined to conditions frequently encountered in general practice, and rare diseases and symptom-complexes are not discussed. Each gland is dealt with as regards function, diagnosis, therapy, available preparations, and prognosis. Six editions of the book have been published in ten years. Compared to the fifth edition (1945) no major changes have been made in this edition, but numerous minor changes were made to incorporate recent advances.

SINDONI ANTHONY M., JR.

The diabetic's handbook how to work with your doctor treatment by diet and insulin. Introduction by Rufus S Reeves with a foreword by Charles C. Wolferth. New York The Ronald Press Company 1948 194 p 21 cm. $3 00 1028

Contents (abridged): Section I, Questions the diabetic asks, and the physician's answers. Section II, Causes and symptoms of diabetes. Section III, Complications of diabetes. Section IV Insulin. Section V Foods. Section VI, Laboratory tests, special care, and general hygiene. The future for the diabetic. Index.

Note: Several authorities have combined to make this a useful handbook for diabetic patients and members of their families. Basic practical information for the diabetic is supplied in Section I in question and answer form. Medical aspects of the disease and its complications, simply described, include discussions by authorities of eye conditions, skin conditions, and mouth disorders respectively. The administration and effect of insulin and details of some simple urine tests are presented in non-technical language. Approximately one-third of the book is devoted to a discussion of foods and recipes.

SOFFER, LOUIS J

Diseases of the adrenals. Second edition, thoroughly revised, with 45 illustrations and 3 colored plates. Philadelphia Lea & Febiger 1948 320 p. illus. (part col d) 24 cm. $6.50. 1029

Contents: The anatomy, morphological structure, and embryology of the adrenals. Chemical and mechanical techniques important in the diagnosis of adrenal cortical disease. Physiology of the adrenals. Addison's disease. The treatment of Addison's disease. Adrenogenital syndrome. Blood electrolyte and hormonal studies. Sympathogonioma, neuroblastoma, and ganglioneuroma of the adrenal. Pheochromocytoma and paraganglioma of the adrenal. Bibliography. Index.

Note. A monograph which aims to put into the hands of clinicians and endocrinologists the most recent knowledge regarding the physiology and diseases of the adrenals. The discussions of symptoms, diagnosis, and treatment are based on the literature of the subject and on the author's experience in the field. Each topic is illustrated with detailed case histories. This edition has been revised to include recent findings relating primarily to the identification of adrenal cortex steroids excreted in the urine, the effects of these secretions on other tissues, and the effects of the secretion of the adrenal medulla on other endocrine glands through its action on the anterior lobe of the hypophysis. Extensive bibliographies are given at the end of each chapter.

TANGNEY, MARY E

Diabetes & the diabetic in the community Philadelphia W B Saunders Company 1947 259 p. illus. 20 cm. $2 75 1030

Contents: Diabetes in the national picture. Etiology and prevention of diabetes. Endogenous insulin. Examination of urine. Exogenous insulin. The diabetic diet. Diabetic coma. Arteriosclerosis and diabetes. Other complications associated with diabetes. Diabetes in childhood and adolescence. Diabetes and pregnancy. The diabetic in the community. Index.

Note. An elementary text for nurses in which the causes, nature, and treatment of diabetes are outlined. It deals particularly with the care and treatment of diabetic persons living at home, rather than with patients in hospitals. The special precautions that diabetics must observe while still carrying on relatively normal lives in society are described in a thorough and detailed manner. The text is compact and written in simple, non-medical language, and there are many references to related literature.

WILDER, RUSSELL MORSE

A primer for diabetic patients an outline of treatment for diabetes with diet, insulin and protamine-zinc insulin including directions and charts for the use of physicians in planning diet prescriptions. Eighth edition, reset. Philadelphia W B Saunders Company 1946 192 p. illus. (part col d) 18 cm. $2.25 1031

Contents (abridged): What is diabetes—what causes it—what can be expected from treatment? The tests of urine for sugar and diacetic acid. Insulin and protamine-zinc insulin and their administration. Complications of diabetes. The diet (for the physician). Substitutions for foods in the standard diets—recipes. Food facts. Weighing food, the metric system, food tables, other tables. Index.

Note. (2163) Based on instruction given in the Diabetic School of the Mayo Clinic, Rochester, Minn., this little handbook of practical information is written for diabetic patients who are living at home but under a doctor's care. It is meant as a guide to help diabetics lead relatively normal lives and describes such practical problems as how to administer the various forms of insulin and how to recognize and treat an excess of insulin in the body. A wide variety of diets is given including many substitute items and the vitamin and chemical content of various common foods. As in previous editions, a series of questions occur throughout the book with page references to the answers in the text. Some slight revision of the text has been made, mainly in line with newer procedures in treating this disease.

YEAR BOOK OF ENDOCRINOLOGY METABOLISM AND NUTRITION

The 1948 Year book of endocrinology metabolism and nutrition. Endocrinology edited by Willard O Thompson. Metabolism and nutrition, edited by Tom D Spies. Chicago The Year Book Publishers, Inc. 1949 544 p. illus. 19 cm. (The practical medicine year books) $4.50. 1032

Contents: Endocrinology: Introduction. The pituitary. The thyroid. The parathyroids. The adrenals. The testes. The ovaries. Miscellaneous. Metabolism and nutrition: Introduction. Pancreas and liver. Alimentary tract. Hemopoietic system. Cardiovascular system. The brain and nervous system. Genitourinary system. Dermal, muscular and skeletal systems. Malnutrition and undernutrition. Therapy. Index. Index to authors.

Note: As in other volumes of this important series the significant literature published throughout the world during the year is digested in the form of abstracts of fair length. In many instances the abstract is supplemented by a special note, written by the editor, which points out the particular significance of the article or criticizes it in some way. References to the original publications are given in footnotes. There are about eighty illustrations in the present issue.

NEUROLOGY

ASSOCIATION FOR RESEARCH IN NERVOUS AND MENTAL DISEASE

Epilepsy proceedings of the Association held jointly with the International League Against Epilepsy December 13 and 14 1946 New York. With 167 illustrations and 56 tables. Editorial board William G Lennox, H. Houston Merritt, and Thomas E Bamford. Baltimore The Williams & Wilkins Company 1947 654 p illus. 24 cm. (Association for Research in Nervous and Mental Disease. Research publications. Vol. XXVI) $12 00 1033

Contents (abridged): Section I, Historical. Research before Hughlings Jackson, by O. Temkin. Section II, Heredity and pathology: Sixty-six twin pairs affected by seizures, by W. G. Lennox. Alterations of the cerebral white matter in epilepsy, by L. M. Scheinker. Section III, Experimental studies: The pattern of muscular response to evoked cortical discharge, by T. C. Ruch and others. Cerebral concussion and convulsive reactivity, by E. A. Spiegel and others. Studies of the relationship between electrolyte of the cerebral cortex and the mechanism of convulsions, by H. F. Colfer. Cerebral blood flow in epilepsy, by F. A. Gibbs and others. Wheat gluten as convulsant, by T. C. Erickson and others. Epilepsy and convulsive therapy, by L. B. Kalinowsky. Section IV, Electroencephalography: Analytical means of discovering the origin and nature of epileptic disturbances, by W. G. Walter. Highest level seizures, by W. Penfield and H. Jasper. Experimental studies on the functional anatomy of petit mal epilepsy, by H. H. Jasper and J. Droogleever-Fortuyn. *Normal electroencephalograms in patients having proven epilepsy,* by J. A. Abbott and R. S. Schwab. Febrile convulsions in childhood, by M. A. Lennox. The electroencephalogram in infantile cerebral palsy, by M. A. Perlstein and others. Section V, *Medical treatment:* Studies in new anticonvulsants, by H. H. Merritt and C. Brenner. The treatment of epilepsy with sodium diphenylhydantoin, by H. D. Fabing and others. The control of epilepsy with 3 methyl 5, 5 phenylethylhydantoin and phenobarbital, by A. R. Loscalzo. A fifteen-year study of epilepsy in children, by E. M. Bridge and others. Section VI, War and epilepsy: Problems of posttraumatic epilepsy in an army hospital, by F. A. Quadfasel and A. E. Walker. Metrazol activated electroencephalography, by I. C. Kaufman and others. The incidence of epilepsy following craniocerebral injury, by C. W. Watson. War and epilepsy and the Veterans Administration, by P. Bailey. Section VII, Psychological-social: The distribution of medical care and the higher education of epileptics, by G. Putter and others. The role of emotion in the causation of epilepsy, by C. D. Aring and others. The personality reaction patterns of children with epilepsy with special reference to the Rorschach method, by K. L. Kogan and Staff of the Baird Foundation Clinic. Index. List of members.

Note. Altogether there are forty-five papers in this volume, of which the twenty-six listed above are representative. The majority of the papers report the results of recent studies, and all of them also summarize or refer to the related literature. Most of them are accompanied by excerpts of the discussions from the floor which followed the reading of the paper at the meeting. The emphasis is very strongly on experimental work, designed to discover basic knowledge about the disease, and on statistical studies. The book is primarily of interest to graduate neurologists and others who are doing research work in the field. It has value also for medical practitioners who desire to keep abreast of new developments in connection with epilepsy.

ASSOCIATION FOR RESEARCH IN NERVOUS AND MENTAL DISEASE

The frontal lobes. Proceedings of the Association December 12 and 13 1947, New York. With 237 illustrations and 39 tables. Baltimore The Williams & Wilkins Company, 1948 901 p illus. 23 cm. (Association for Research in Nervous and Mental Disease. Research publications. Vol. XXVII) $12.50 1034

Contents (abridged) Part I, Histology of the frontal lobes: Frontal lobe ablation in chimpanzees, by M. P Crawford, J. F Fulton, C. F Jacobsen and J. B. Wolfe. Specialization of behavioral functions and the frontal lobes, by W C. Halstead The frontal lobe of primates—cytoarchitectural studies, by G. von Bonin. The pyramidal tract—basic considerations of corticospinal neurons, by A. M. Lassek. Activation of the cerebral cortex by antidromic volleys in the pyramidal tract, by C. N Woolsey and Hsiang-Tung Chang. The non-pyramidal motor projections from the frontal cerebral cortex, by F A. Mettler. Part II, Experimental studies: The motor functions of the agranular frontal cortex, by D. Denny-Brown and E. H. Botterell. Some forebrain mechanisms involved in expression of rage with special reference to suppression of angry behavior, by P Bard and V B. Mountcastle. Stimulation and regional ablation of orbital surface of frontal lobe, by R. B. Livingston and others. The anterior cingulate gyrus and personality by A. A. Ward, Jr. Effect of extirpation of frontal areas upon learning performance of monkeys, by H. F Harlow and P H. Settlage. Normal and pathological afterdischarge from frontal cortex, by A. E. Walker and H. C. Johnson. Part III, Clinical studies Report of case of bilateral frontal lobe defect, by S. S. Ackerly and A. L. Benton. Symposium on gyrectomy by Wilder Penfield, D E. Cameron, M. D. Penfield and R. B. Malmo. The cortical motor pattern apraxias, by J M. Nielsen. Effect of cortical excision and stimulation of the frontal lobe on speech, by J P Robb. Autonomic functions of frontal lobes—studies on patients with head trauma, by M. G. Netsky and H. Starr. Telencephalization of survival characteristics, by R. M. Brickner Part IV, Frontal lobotomy: Personality analysis before and after frontal lobotomy, by G. Rylander Frontal lobotomy in the treatment of unbearable pain, by J W Watts and W Freeman. The psychological effects of frontal lobotomy performed for the alleviation of pain, by Y D. Koskoff, W Dennis, D. Lazovik and E. T Wheeler A cooperative clinical study of lobotomy by Connecticut Lobotomy Committee—R. E. Moore, S. Friedman, B Simon and J. Farmer. Effects of frontal lobotomy on cerebral blood flow and metabolism, by H. A. Shenkin, E. B. Woodford, F A. Freyhan and S. S. Kety Cumulative bibliography Index. List of members.

Note. The program which resulted in the production of this volume was planned by the sponsoring association in order to present (1) the recent advances which have been made in our knowledge of functional localization in the frontal lobes of the primate brain, and (2) clinical experience with lobotomy in schizophrenia, unbearable pain, and other mental disorders. Altogether there are thirty-seven papers in the book and most of them are accompanied by selections from the discussions which followed the original presentation of the papers The bibliography runs to thirty-two pages.

BROCK, SAMUEL

The basis of clinical neurology the anatomy and physiology of the nervous system in their application to clinical neurology Second edition. Baltimore The Williams & Wilkins Co 1945 393 p. illus 23 cm. $5.50 1035

Contents (abridged) The peripheral nervous system. The spinal cord and reflex action. The rôle of the spinal cord in the motor system. The rôle of the spinal cord in sensation, trophism, vasomotor function and pilomotor and sudomotor function. The visceral functions of the spinal cord The circulation of the spinal cord. The gross and microscopic anatomy of the brain stem. The medulla and pons in the control of hearing, equilibrium, mastication, facial sensation and expression The brain stem in the control of ocular movement, in its rôle as reflex organ The cerebellum in the control of synergy and tone. The rôle of the thalamus in sensation The hypothalamic control of vegetative functions. The pituitary gland. The rôle of the basal ganglia and the basal extrapyramidal systems. The brain—in its general functions—in the function of symbolic thinking—in its relations to conditioned and unconditioned reflexes, to inhibition and effector discharge. The frontal lobe. The functions of the temporal, parietal and occipital lobes. The functions of the rhinencephalon. The vegetative nervous system and its functions. Posture. The cerebro-spinal fluid. Index.

Note The clinical manifestations of disease and injury to particular nerves and parts of the nervous system are summarized in specific detail in this useful work. The physical effects and signs are related to the basic neurophysiology and neuroanatomy Evidence from animal experiments is introduced when it is needed to indicate proved or probable relationships. Extensive references are made to original sources. In this edition considerable amount of textual material and twenty-eight new illustrations have been added. Some additions have been made to the bibliographies.

COURVILLE, CYRIL BRIAN

Pathology of the central nervous system A study based upon a survey of lesions found in a series of thirty thousand autopsies. Second edition, revised and enlarged. Mountain View California Pacific Press Publishing Association 1945 450 p. illus 26 cm. $6 00 1036

Contents: Introduction. Congenital malformations and anomalies of the central nervous system. Diseases of the intracranial and intraspinal blood vessels. Infectious diseases of the central nervous system and its envelopes. Effects of trauma on the central nervous system. The intoxications. Diseases of unknown etiology degenerative diseases, abiotrophies. Tumors of the intracranial and intraspinal spaces Appendix The autopsy series. Hydrocephalus. Anencephalia. Cortical atrophy Index.

Note: The purpose of this text is to provide the medical student or physician with the background of pathological knowledge essential for an understanding of the diseases of the central nervous system. Common diseases of the brain and spinal cord are described with special emphasis placed on the development of the lesion, its growth, morphologic character and final effect on the nervous tissue. Excellent photographs of pathological specimens are included. This edition has been enlarged by 114 pages and represents reorganization and rewriting of most of the chapters. Part III in particular dealing with infectious diseases of the central nervous system, has been completely revised and enlarged. References are given in the form of footnotes.

DAVIDOFF LEO MAX, AND CORNELIUS G DYKE

The normal encephalogram. Second edition, thoroughly revised. Illustrated with 155 engravings Philadelphia Lea & Febiger 1946 232 p illus. 24 cm. $5.50 1037

Contents General considerations. The ventricles, interventricular foramina, and aqueduct of Sylvius. The cerebral convolutions and sulci. The subarachnoid cisterns and their contents. Intracranial structures and their related fluid spaces. Bibliography Index.

Note. (2173) This presentation of the fundamentals of encephalography as used in the diagnosis of diseases within the intracranial cavity is written for neurologists, neuro-surgeons, roentgenologists, pediatricians, internists, and general practitioners. The book is based on the authors' experience with over 8000 cases and on review of the literature of the subject. This edition varies only slightly from the previous one. New material on the technique of encephalography has been added and the twelve-page bibliography has been enlarged by the inclusion of literature published since the appearance of the first edition in 1937

DE JONG, HERMAN HOLLAND

Experimental catatonia a general reaction-form of the central nervous system and its implications for human pathology Baltimore, Md. The Williams & Wilkins Company 1945 225 p illus. 24 cm. $4.00 1038

Contents: Foreword, by Dr Nolan D C. Lewis Foreword, by Dr David T Smith. Part I Experimental studies in animals. Definition and description of experimental catatonia Additional experiments on bulbocapnine catatonia. Experimental catatonia produced by injection of chemical and biochemical substances other than bulbocapnine. Asphyxiation catatonia, etc. Experimental catatonia induced by brain lesions and mechanical means. Experimental catatonia produced by electricity, radiogenic stimulation, etc. Experimental catatonia produced by alteration of metabolic function.

Part II, Implications for human pathology: The similarity of catatonic symptoms in man and animals. Clinical signs derived from studies on experimental catatonia. Experimental catatonia by means of lipoid soluble and other substances of human urine from normal and pathological individuals. Quantitative determination of histamine in the blood of normal individuals and schizophrenics. The cephalin-cholesterol flocculation blood test in catatonic and other schizophrenics. General summary and conclusions.

Note. A detailed description of series of experiments conducted by the author and his associates, in hich the catatonic state was induced in animals by the use of drugs, by anoxemia, by centrifugation, and by limiting the blood supply to the liver. The experiments led to the theory that catatonia was produced by derangement in the metabolism of the central nervous system, which in turn was caused by toxic products arising in the liver. The application of these findings to human pathology is discussed in the second part of the book.

DENNY BROWN, DEREK

Diseases of the basal ganglia and subthalamic nuclei. Edited by Henry A. Christian. Reprinted from Oxford loose-leaf medicine with the same page numbers as in that work. New York Oxford University Press, 1946 74 p illus. (part col'd) 24 cm. (Oxford medical publications) $2.50 1039

Contents (abridged) Anatomical considerations. Physiological considerations. Paralysis agitans. Progressive atrophy of the globus pallidus. Post-encephalitic parkinsonism. Arteriosclerotic parkinsonism. Syphilitic parkinsonism. Parkinsonism following intoxication. Familial and senile tremor. Hepato-lenticular degeneration. Dystonia musculorum deformans. Double athetosis. Progressive rigidity with athetosis. Huntington's chorea. Bibliography

Note A brief systematic survey of the motor disorders associated with pathological changes in the basal ganglia and subthalamic nuclei. General anatomical, physiological, and pathological considerations are followed by sections discussing the individual diseases according to classification established by the author in the introductory chapter. Each section contains the definition of the disease and brief outline of its etiology history symptomatology pathology and therapy. The bibliography consists of 348 references.

DENNY BROWN DEREK

Handbook of neurological examination and case recording. Cambridge Mass Harvard University Press, 1946 112 p illus. 18 cm. Spiral binding $1 75 1040

Contents (abridged) The case history. The record of examination. Notes on methods of examination and recording: Awareness, co-operation, personality and general defect, including gait. Cranial nerve function. Motor function. The reflexes. Tenderness located by palpation or other test of neuromuscular structures. Deformity or limitation in range of movement in relation to bony structure. Outline for psychiatric examination. The reports of special investigations: Lumbar puncture. Air-encephalography. Lipiodol myelography. Electroencephalography. Roentgenograms of skull and spine. Description of fit. Removal of specimen for biopsy. Tests for autonomic nervous function.

Note A brief outline of methods to be followed in conducting clinical observations of patients suffering from various nervous disorders. It tells how to obtain and record case histories, and describes specific tests which must be carried out during the course of diagnosis. The book is intended to assist medical students and interns develop good examination procedure.

FISHBEIN MORRIS editor

A bibliography of infantile paralysis 1789–1944 with selected abstracts and annotations, prepared under direction of the National Foundation for Infantile Paralysis, Inc. edited by Morris Fishbein compiled by Ludvig Hektoen and Ella M Salmonsen Philadelphia J B Lippincott Company 1946 672 p 26 cm. $15 00 1041

Note The scope of this bibliography is the international periodical literature. Textbooks, encyclopedias, official publications of boards of health and similar types of publications are included only in rare instances when they reported new developments. Adequate citations to the original publications are given throughout, but entries for publications before 1912 are sparsely annotated. Beginning with 1912 majority of the entries are annotated, and some of the annotations are of considerable length. The subject index is ninety-three pages long and exceptionally detailed.

GRANICH, LOUIS

Aphasia a guide to retraining. Appendix in collaboration with Sergeant George W Pangle. New York Grune & Stratton 1947 108 p 22 cm. $3 00 1042

Contents: Aphasic defects and related specific losses: The typical speech disabilities. Receptive aphasia. Alexia and related disorders affecting reading. Agraphia and related disorders affecting writing. Arithmetic. The clinical examination. General principles in retraining. Techniques. General defects in brain injury Appendix. References.

Note: A brief outline of techniques which have been employed in U S. Army hospitals for the retraining and rehabilitation of individuals ho have suffered impairment of the power to use or understand speech as result of brain injury The description of various types of defects and the discussion of basic retraining principles are supplemented by detailed account of the retraining of eight selected cases.

GROFF ROBERT ARMAND AND SARA JANE HOUTZ

Manual of diagnosis and management of peripheral nerve injuries With an introduction by I S Ravdin. 111 original illustrations. Philadelphia J B Lippincott Company 1945 188 p illus. 24 cm. $6 00 1043

Contents: Part One, Nerve injuries. Anatomy and physiology of the peripheral nervous system. Reactions of injured nerves. Recognition of an injured nerve. Recognition of the types of injury Recovery and regeneration. Treatment. Postoperative care. Plexus injuries. Causalgia. Part Two, Peripheral and cranial nerve function. Muscle isolation and testing. Cervical plexus. Brachial plexus and upper extremity Thoracic nerves, lumbar plexus and sacral plexus. Cranial nerves. Index.

Note. This practical manual for surgeons and physiotherapists is the outgrowth of the authors' experience with an unusually large number of nerve injury cases in war hospital in Boston. It guides the reader in simple language, from the recognition of the injury to its treatment. A feature of great usefulness is the presentation in Part Two of muscle action diagrams accompanied by summary of the respective peripheral nerve function. The cranial nerve injuries are discussed in separate chapter A short list of references is appended.

HALSTEAD WARD CAMPBELL

Brain and intelligence a quantitative study of the frontal lobes. Chicago The University of Chicago Press 1947 206 p illus. 23 cm. (The University of Chicago. Committee on Publications in Biology and Medicine) $6 00 1044

Contents (abridged) Part I, The structure of biological intelligence Psychometric intelligence. Clinical intelligence. Neurological conceptions of intelligence. Present studies. Quantitative results. The central integrative field factor C. The A factor The power factor P The directional factor D The ocher structure of the ego. Part II, Localization of function in the brain Representation of the basic factors in the brain. Impairment index and the frontal lobes Impairment index and closed head (brain) injuries. Brain function and the problem of equivalence. Appendixes: Abstracts of medical histories of cerebral lobectomies. Diagrams of brain lesions of cerebral lobectomies Quantitative indicators. References and bibliography Author index. Subject index.

Note The results of twelve-year investigation of the effects of brain lesions on intelligence. Biological intelligence was resolved into four factors hich are fully described Using these as basis, approximately 230 brain-injured persons were examined with battery of twenty-seven neuropsychological tests. The results are fully reported and interpreted. Among the conclusions drawn by the author is one that the frontal lobes are the brain areas most essential to

biological intelligence. The work is written on professional level and is of interest to neurologists, biologists, and psychologists.

HASSIN, GEORGE BORIS

Histopathology of the peripheral and central nervous systems. Third edition (revised and enlarged) With 325 illustrations. Chicago The Author 1948 612 p illus. 24 $8.50 1045

Contents (abridged) Part I, General considerations. Part II, Diseases of the peripheral nerves: Injuries and secondary nerve degeneration. Neuritis and polyneuritis. Tumors of the peripheral nerves. Diseases of the muscles. Part III, Diseases of the spinal cord Inflammatory diseases. Degenerative diseases. Vascular diseases. Traumatic lesions. Syphilogenous diseases of the spinal cord. Diseases of the spinal meninges and their spaces. Tumors of the spinal cord. Part IV Diseases of the brain Inflammatory infiltrative diseases. Metabolic diseases. Suppurative (purulent) inflammations. Syphilogenous diseases. Diseases of the cerebral blood vessels. Arteriosclerotic diseases of the brain and allied states. Traumatic lesions of the brain. Progressive and involutional degenerations of the brain. Extrapyramidal diseases. Diseases of the cerebellum. Diseases of the cerebral ventricles and meninges. Tumors of the brain. Epilepsy and dementia praecox. Part Staining methods: Stains for cells and their special. Stains for myelin fibers. Stains for axons and nerve fibers. Glia tissue stains. Elastic tissue stains. Spirochetal stains. Stains for catabolic products. Subject index.

Note: (1375) A standard treatise on the histological changes which occur in diseases of the nervous system. The purpose is to give fuller treatment of this important aspect of neurology than is afforded by the general texts on neurology and neuropsychiatry. The viewpoint is essentially histological, and the strictly clinical aspects of the diseases are mentioned only incidentally. Most of the approximately 300 illustrations are reproductions of microphotographs of nerve cells and associated structures. Changes and revisions made in this edition include new chapters on catabolic diseases, trauma of the cauda equina, and histopathology of spina bifida and rewriting of the chapters dealing with progressive muscular atrophy Landry's paralysis, and amyotonia congenita.

HAYMAKER, WEBB, AND BARNES WOODHALL

Peripheral nerve injuries principles of diagnosis. 225 illustrations. Philadelphia W B Saunders Company 1945 227 p illus. 24 cm. $5 00 1046

Contents: Section I, An analysis of the segmental and the peripheral nerve supply of skin, muscles and skeleton: General principles of the composition of segmental nerves, plexuses and peripheral nerves. The innervation of skin and muscles by spinal segments. The distribution of the peripheral nerves. Innervation of the skeleton, and the disorders of bones and joints resulting from nerve injuries Section II, Examination of the peripheral nervous system Procedure in the examination of the peripheral nervous system. An analysis of the movements tested in neurological examination. Section III, Injuries of plexuses and peripheral nerves: Injuries of the cervical plexus. Injuries of the brachial plexus. Injuries of peripheral nerves derived from the brachial plexus. Injuries of the peripheral nerves derived from the lumbar plexus. Injuries of the sacral plexus and its constituent nerves. Bibliography Index.

Note: A practical manual written primarily to assist army medical officers in the diagnosis of injuries sustained by the nerves serving the neck, shoulders, pelvic girdle, and limbs. The symptoms and nature of the more common nerve injuries are described and detailed instructions are given for carrying out an examination of the patient prior to final diagnosis. The book is well illustrated with drawings and photographs, the latter of which were obtained from the collection maintained by the Army Institute of Pathology

HOCH PAUL H., AND ROBERT P KNIGHT editors

Epilepsy, psychiatric aspects of convulsive disorders. The proceedings of the thirty-sixth annual meeting of the American Psychopathological Association, held in New York City May 1946 New York Grune & Stratton 1947 214 p illus. 22 cm. $4.00 1047

Contents: Epilepsy—a brief historical sketch, by H. A. Bunker. Historical review of the pharmacological approach to the treatment of epilepsy by H. H. Merritt. The genetics of epilepsy by F J Kallmann and G. Sander. The incidence and prevalence of intramural epilepsy by B. Malzberg. The prevalence and incidence of extramural epilepsy by J. C. Price, K. L. Kagan, and L. R. Tompkins. Social implications and management, by G. K. Collier The medicolegal aspects of epilepsy by A. M Fine. The personality of the epileptic, by Z. A. Piotrowski. Differential diagnosis of epilepsy by O. Diethelm. Diagnostic testing in convulsive disorders, by M. Mayman and D Rapaport. Psychopathology of epilepsy by B. Mittelmann. Some psychopathological aspects of organic brain damage, by P H. Hoch. The experimental production of epilepsy in animals, by N. Kopeloff, L. M. Kopeloff and B. L. Pacella. Electro-encephalography in epilepsy by H. H. Jasper. Maternal nutritional deficiency and the incidence of sound-induced convulsions in young albino rats, by R. A. Patton. Index.

Note: The new medical and neurological knowledge of epilepsy, as well as the new drugs now used to control seizures, is discussed in this collection of papers, along with discussions of the psychiatric aspects. The papers are addressed to psychiatrists and other members of the medical profession. Some of them are accompanied by extensive lists of related literature.

MERRITT HIRAM HOUSTON, AND OTHERS

Fundamentals of clinical neurology, by H. Houston Merritt Fred A Mettler and Tracy Jackson Putnam. Philadelphia The Blakiston Company 1947 289 p. illus. 26 cm. $6.00 1048

Contents: Part I, Examination of the nervous system Introduction. History and general physical examination. Generalities concerning the neurologic examination and instruments used. The cranial nerves. The motor system. The sensory system. Speech and other higher cerebral functions. The comatose patient. Part II, The anatomic diagnosis: Peripheral nerve, dorsal root ganglion, and ventral column cells. The spinal cord. The infratentorial brain stem. The cerebellum. Thalamus and corpus striatum. The cerebral cortex. The cerebrospinal fluid. Index.

Note. This book outlines practical methods of examination and briefly describes the anatomy and physiology of the nervous system. The symptoms peculiar to various types of nerve injury and disease are discussed, but no attempt is made to cover methods of treatment. It is designed as text for students and manual for general medical practitioners. The authors are members of the faculty of the College of Physicians and Surgeons of Columbia University

MICHIGAN UNIVERSITY DEPARTMENT OF SPEECH

Aphasia in adults, the rehabilitation of persons with loss or disturbance of the faculty of speech resulting from brain injury by Ollie L. Backus L. Dell Henry John N Clancy Harriet M. Dunn. The Speech Clinic of the Institute for Human Adjustment and the Department of Speech. Ann Arbor Michigan University of Michigan Press 1947 47 p. illus. 23 cm. Paper 25 cents. 1049

Contents: Aphasia and its problems: The nature of aphasia. Causes of aphasia. Possibilities for recovery of speech. The role of the speech clinic in rehabilitation. Procedures in rehabilitation: Knowing the patient. The patient's readjustment. Techniques basic to speech re-education. Speech re-education. Conclusion.

Note. A popular pamphlet by four members of The Speech Clinic of the Institute for Human Adjustment and the Department of Speech of the University of Michigan. It offers basic information on the causes and the nature of speech disorders resulting from brain injuries and on the clinical methods of speech rehabilitation. Since the program of re-education of the adult towards speech recovery largely depends on the attitude of his environment, the primary purpose of the brochure is to reach and enlighten the patient's family

MOENCH, LOUIS G

Headache. Chicago The Year Book Publishers, Inc., 1947 207 p. illus. 21 cm. $4 00 1050

Contents: Pathologic anatomy and physiology of headache. Headaches from intracranial pathology spinal puncture and ventriculography Cranial nerve neuralgias. Headache of ocular origin. Headache of nasal origin. Headache from pathology in the neck. Headache from systemic disorders. Histamine headaches Migraine. Headache of emotional origin. Index.

Note. This manual, prepared for the general practitioner brings together in concise form up-to-date information regarding one of man's most common complaints. Each chapter deals with the incidence, physiology, diagnosis, and treatment of particular type of headache. Selected bibliographies are given at the end of each chapter. The author is Assistant Clinical Professor of Medicine in the University of Utah School of Medicine.

NIELSEN JOHANNES MAAGAARD

Agnosia, apraxia aphasia their value in cerebral localization. Second edition completely revised. Fifty-nine illustrations New York Paul B Hoeber, Inc., Medical Book Department of Harper & Brothers 1946 292 p. illus. 24 cm. $5 00 1051

Contents Historical introduction. Author's concepts of agnosia, apraxia, and aphasia. Method of presentation. Agnosias. Apraxias. Aphasias. Miscellaneous terms. The body scheme. Method of examination. The evidence. Appendix. Bibliography Index.

Note: The discussion of three types of neurological disturbances which may arise from psychological causes or cerebral lesions, presented in this monograph, will be of interest to both the neurologist and the psychiatrist. The clinical aspects of the subject and methods of diagnosis are stressed, but attention is given also to psychological factors. In this revision the author has elaborated on the observations presented in the previous edition and has endeavored to offer more convincing proof of the earlier statements. To do this he has outlined numerous case histories, selected from 140 clinical studies upon which the monograph is based. A 10 page bibliography is included.

NIELSEN JOHANNES MAAGAARD

A textbook of clinical neurology Second edition revised. With 190 illustrations. New York Paul B Hoeber, Inc. Medical Book Department of Harper & Brothers, 1946 699 p. illus. 26 cm. $7.50 1052

Contents (abridged) Diseases of the spinal nerves. Structures between the nerves and the spinal cord. Diseases of the spinal cord. Diseases of the cranial nerves. Syndromes of the brain stem. Syndromes of the cerebellum. Syndromes of the thalamus. Diseases of the corpus striatum and subthalamic region. The vegetative nervous system. Clinical cerebral localization. Inflammations and intoxications. Intracranial and spinal tumors. The epilepsies. Migraine and headaches in general. Multiple sclerosis. Trauma to the brain and spinal cord. Diseases manifesting themselves in the muscles or myoneural junctions. Diseases of bone affecting the nervous system. Vitamins and vitamineses. Electro-encephalography. The psychoneuroses. Landmarks in clinical neurology Index

Note: (2181) A concise and practical presentation of the essential facts of neuroanatomy and physiology as they relate to clinical diagnosis and treatment. The volume is intended to provide the medical student with a sound groundwork in clinical neurology but it will also be of value to the practicing neurologist psychiatrist, and physician. In this edition the section on the use of the sulfonamides and penicillin has been expanded. New material on transplacements and the physiology of the basal ganglia and cerebral cortex has been added, and the chapter on electro-encephalography thoroughly revised. Chapter bibliographies and a list of publications of historical importance are included.

SCHEINKER, I MARK

Neuropathology in its clinicopathologic aspects with a foreword by Tracy J Putnam. Springfield, Ill. Charles C Thomas 1946 306 p illus. (part col d) $7 50 1053

Contents Diseases of vascular origin Neurosyphilis. Demyelinating processes. Inflammatory diseases. Myopathies or motor neuron diseases. Syringomyelia. Cerebellar disorders. Progressive degenerative diseases. Presenile and involutional senile degeneration. Bibliography Index.

Note A concise but valuable presentation of the pathology of the common diseases of the central nervous system. The author has achieved brevity partly by omitting the rarer diseases but largely by dividing his treatise into three books: the present work, and two entitled respectively *Neurosurgical neuropathology* and *Medical neuropathology* which are scheduled for future publication. Much attention is paid in the discussions of the various diseases to the relations between the blood supply and structural changes in nervous tissue; and to the importance of observing and studying the sequence of changes in diseased tissue. There are 208 figures, many of which are reproductions of microphotographs prepared especially for this work at the laboratory of neuropathology of the Cincinnati General Hospital.

WALKER, ARTHUR EARL, AND HERBERT C. JOHNSON

Penicillin in neurology Springfield, Ill. Charles C Thomas 1946 202 p illus. 24 cm. $5 50 1054

Contents. General considerations. Administration of penicillin. Toxicity of penicillin to the central nervous system. Effect of penicillin on the cerebral cortex. Neuropathological reactions to penicillin. Penicillin in the treatment of meningitis. Penicillin therapy in pyogenic infections of the skull and brain. Penicillin therapy in diseases of the spinal cord and its coverings. Penicillin treatment of syphilis of the nervous system. Other antibiotic substances and the central nervous system. Index.

Note: An important monograph that embodies the results of two investigations recommended by the Committee on Medical Research of the National Research Council and carried out by the University of Chicago under a contract with the Office of Scientific Research and Development. These investigations were concerned with the dispersion and absorption of penicillin when it is administered by intrathecal injection and with its effect on both healthy and diseased nervous tissue. Clinical experience also is included. The work is addressed to physicians but it is of interest also to persons engaged in biochemical research work. Each chapter is supplied with exact literature references which are keyed to the text.

WARTENBERG ROBERT

The examination of reflexes a simplification. Foreword by Foster Kennedy Chicago The Year Book Publishers Inc., 1945 222 p. illus. 18 cm. $3.25 1055

Contents (abridged) Basic principles. Methods of reinforcement. Orbicularis oculi reflex. Head retraction reflex. Finger flexor reflex. Hand flexor reflex. Finger-thumb reflex (Mayer) Brachioradial reflex. Elicitation of multiple reflexes. Babinski's inversion of the radial reflex. Biceps reflex. Pectoral reflex. Abdominal skin reflex. Abdominal muscle reflex. Quadriceps reflex. Adductor reflex of the leg. Reflex of the semitendinosus and semimembranosus muscles. Knee flexor reflex. Flexor muscle reflex. Distant toe flexor reflex. Conclusion. References. Indexes.

Note Because of the importance of reflexes in neurological examinations, the author of this short but valuable work has surveyed and critically condensed the literature and has endeavored to simplify the nomenclature. He shows that many reflexes have been discovered over and over and given a new name each time; and furthermore, muscular phenomena that are not reflexes have been so named. His book is an effort to clear up the confusion for the benefit of both medical students and practitioners. Statements in the text are keyed to the list of references which contains 443 entries.

WECHSLER, ISRAEL SPAUER

A textbook of clinical neurology with an introduction to the history of neurology Sixth edition, illustrated. Philadelphia W B Saunders Company 1947 829 p illus. 24 cm. $8.50 1056

Contents (abridged) Part I, Method of examination Neurological examination. Psychological diagnosis. Part II, The spinal cord. Part III, The peripheral nerves Neuritis and neuropathy Diseases of the spinal nerves and plexuses. Tumors and nerve—neuromas. Diseases of the cranial nerves Neuralgia. Part IV The brain General symptomatology and focal or regional diagnosis of diseases of the brain. Aphasia. Circulatory disturbances of the brain. Meningitis. Encephalitis. Syphilis of the nervous system. Tumors of the brain. Injuries of the brain Disorders of motility and diseases of the basal ganglia. Tics, spasms, and myoclonias. The epilepsies and the convulsive state. The migraine or paroxysmal headaches (hemicrania) Tetany Rabies (hydrophobia or lyssa) Affections of the

autonomic nervous system. Part v Neuroses Trauma and the nervous system. Introduction to history of neurology Index.

Note (2187) A widely used textbook and reference manual of the neurological conditions which are of clinical interest. Historical material is assigned to one chapter and the case reports which are so typical of books on this subject are totally lacking. Instead, the space is devoted to concise discussions of the symptoms, diagnosis, treatment, and other relevant aspects of a wide variety of neurological syndromes. A fair number of changes have been made in preparing the work for this edition. The former chapter on psychometric tests was completely rewritten and its title changed. The bibliographies have been revised and there are a number of new illustrations. Significant changes have been made in the discussions of diagnosis and treatment.

WEIL ARTHUR

Textbook of neuropathology Second edition revised and enlarged. New York Grune & Stratton, 1945 356 p illus. 23 cm. $5.50. 1057

Contents: Introduction. Changes through autolysis and fixation. Diseases of the neuron. The glia and its pathology. Pathology of the myelin sheath and the axis-cylinder Anemic softening. Arteriosclerosis. Inflammation. Infections. Intoxications. Injuries. Degenerative diseases. Tumors. Congenital malformations. Appendix. Bibliography Index.

Note: (1188) A compact, thoroughly illustrated review of the present knowledge of diseased nervous tissue, intended as a textbook for use in medical schools and as a reference book for the practitioner and laboratory worker. The author pays tribute to the German medical men who made a specialty of this branch of neurology before its importance was acknowledged in the United States, and his bibliography contains citations of many German articles. Changes in this edition include the adding of 37 illustrations and new material on the neurological manifestations of vitamin deficiencies. The author is Associate Professor of Neuropathology at Northwestern University Medical School.

WOLFF HAROLD G

Headache and other head pain. New York Oxford University Press 1948 642 p illus. 24 cm. $12.00 1058

Contents (abridged) Foreword, by David P Barr Pain-sensitive structures within the cranial cavity Headache associated with changes in intracranial pressure. Headache and brain tumor Headache from distention of cerebral and pial arteries. The cerebral circulation and the headache of subarachnoid hemorrhage. The extracranial blood vessels as pain-sensitive structures. Inflammation of cranial arteries as a source of headache and other pain. Headache in the migraine syndrome. The relation of life situations, personality features, and reactions to the migraine syndrome. Vascular accidents with migraine headache. Headache associated with arterial hypertension. 'Cephalalgias, and 'atypical neuralgias' of the face and head. The teeth as sources of headache and other pain. The nasal, paranasal, and aural structures as sources of headache and other pain. The eyes as a source of headache and other pains. Muscles of the head and neck as sources of headache and other pain. Chronic post-traumatic headache. Typical or major neuralgias ("tic douloureux") postinfectious neuralgias, neuritides, and "intractable pain. The action of analgesics. Index.

Note: A comprehensive summary and report of a series of planned investigations extending over about fifteen years into the various disorders commonly classified as headache. The purpose of the research was to remove, if possible, headache from the category of symptoms and to build up a more accurate and comprehensive picture than has been given in previous studies of headache in relation to nervous phenomena or migraine. The studies were carried out by the author and numerous associates at Cornell University Medical College and New York Hospital. In preparing the book, the findings reported in previously published literature have also been incorporated in the appropriate chapters. The relevant literature is cited in chapter bibliographies. The book concludes with a useful summary chapter on the clinical differentiation of the various kinds of headache pain.

YEAR BOOK OF NEUROLOGY PSYCHIATRY AND NEUROSURGERY

The 1948 Year book of neurology psychiatry and neurosurgery Neurology edited by Hans H. Reese and Mabel G Masten Psychiatry edited by Nolan D C. Lewis. Neurosurgery edited by Percival Bailey Chicago The Year Book Publishers, Inc., 1949 750 p. illus. 19 cm. (The practical medicine year books) $5 00. 1059

Contents (abridged) Neurology: Anatomy physiology and pathology Convulsive disorders. Electrodiagnosis. Disorders of the central nervous system. Meninges and meningitis. Cranial and peripheral nerves. Nutritional disorders. Disorders of the spine and spinal cord. Disorders of muscular and neuromuscular systems. Disorders of the vascular system. Autonomic nervous system. Syphilis of the nervous system. Psychiatry: Child psychiatry Schizophrenia, affective disorders and miscellaneous reactions. Organic disorders. Toxic reactions. Psychoneuroses and psychosomatic disorders. Therapy Psychosurgery Miscellaneous therapeutic procedures. Neurosurgery: Tumors. Disorders of movement. Epilepsy Lobotomy Infection. Wounds. Vascular system. Spinal cord. Intervertebral disks. Peripheral nerves. Cranial nerves. Sympathetic nerves. Index. Index to authors.

Note (1199a) This annual publication is edited and organized similarly to the other annuals in the same series. The chapters consist of fairly long abstracts of significant articles which have been selected from the world's medical periodicals. A footnote reference to the original publication is given in all cases. There are occasional notes by the editor which criticize or supplement the abstracts. The volume is generously illustrated and fully indexed. The issue at hand contains 140 figures.

OPHTHALMOLOGY

ADLER, FRANCIS HEED

Gifford's textbook of ophthalmology Fourth edition, illustrated. Philadelphia W B Saunders Company 1947 512 p. illus. (part col d) 24 cm. $6.00 1060

Contents External examination of eye and adnexa. Examination of the eye by ophthalmoscopy Examination of the eye by other objective methods. Functional examination of the eye. Disturbances of ocular motility Optical defects of the eye. The orbit. The eyelids. The lacrimal apparatus. The conjunctiva. The cornea. The sclera. Iris, ciliary body pupil. The choroid and vitreous body The crystalline lens. Glaucoma. The retina. The optic nerve. Ocular disorders due to diseases of the central nervous system. Ocular manifestations of general diseases. Orientation on surgical operations on the eye and adnexa. Therapeutic agents used in ophthalmology Index.

Note. (2295) In this revision of a standard work the author has sought to limit the material to subjects which will be of value to medical students and physicians who are not specializing in ophthalmology Emphasis is thus placed on the etiology diagnosis, and treatment of the more common diseases, injuries, and disorders of the eye. Techniques of refraction and operation are condensed and surgical procedures are now grouped in a separate chapter A special effort has been made to indicate which conditions may be treated by the general practitioner and which require more specialized attention. Brief chapter bibliographies are included.

BERENS CONRAD, AND JOSHUA ZUCKERMAN

Diagnostic examination of the eye, step-by-step procedure. 410 illustrations, including 48 in full color on 13 plates. Philadelphia J B Lippincott Company 1946 711 p. illus. (part col'd) 24 cm. $15 00 1061

Contents (abridged) Part One, Examination during first visit: General survey of patient and special survey or examination of eye. Palpation. Visual acuity Motor function. Biomicroscopy with the standard slit lamp. Ophthalmoscopy Transillumination. Retinoscopy and refraction. Tonometry Part Two, Examination during second or final visit. Postcycloplegic test (completion of refraction) Color vision. Fusion sense and depth perception. Perimetry and campimetry Part Three, Supplementary part of examination: Supplementary information. Supplementary examinations and methods used in the examination of the outer eye. Supplementary instruments. Index.

Note: The purpose of this text is to assist medical students, ophthalmologists, and general practitioners to develop a systematic and thorough method of eye examination. Little space is thus devoted to discussions of embryology anatomy and treatment, but examination procedures and methods of recording, correlating, and interpreting the information obtained are presented in great detail.

The entire text is well organized and the brief sections and paragraphs arranged in outline form facilitate its use for rapid reference. Equipment, methods of examination, charts, and pathological conditions are fully illustrated. Each chapter concludes with selective bibliography

COGAN, DAVID G

Neurology of the ocular muscles Springfield, Illinois Charles C Thomas, 1948 214 p illus. 24 cm. $6.50 1062

Contents (abridged) Characteristics of the extraocular muscles. Gross anatomy and action of the extraocular muscles. Tonus of the extraocular muscles. Nerves running to the extraocular muscles. Supranuclear connections of the ocular motor system. Pupil. Nystagmus References Index.

Note A short, clearly written work whose purpose is to aid the beginning practitioner in ophthalmology in the making of accurate diagnoses of the causes of disturbances of the ocular motor system by relating the clinical signs and symptoms to the underlying neurophysiology and neuroanatomy It is based on material used in postgraduate courses at the Harvard Medical School. Each chapter concludes with useful summary There are sixty-nine figures and bibliography containing 833 references.

COWAN ALFRED

Refraction of the eye. Third edition, thoroughly revised with 187 illustrations and 3 colored plates. Philadelphia Lea & Febiger 1948 287 p illus. (part col d) 24 cm. $5.50 1063

Contents Introductory Reflection at plane surfaces. Refraction at plane surfaces. Reflection at spheric surfaces. Refraction by spheric surface. Lenses. Thick lenses. Cylindric lenses. Ophthalmic lenses. Neutralization of prisms and lenses The normal static eye. Schematic eye Aperture of the system. Diffusion images—aberrations of the eye. Accommodation. Visual acuity Ametropia. The eye and lens. Accessory effects of the correcting lens. Methods for the determination of the refraction of the eye. The management and optical treatment of ametropia. Contact glasses Telescopic spectacles Bibliography Index.

Note An acknowledged contribution to ophthalmic optics, in which clinical aberrations of the optical system of the eye are analyzed against background of physical optics. The corrective measures which can be embodied in spectacle lenses are presented from the same viewpoint. The book is designed for medical students who are preparing for this specialty and also for practitioners already at work in the field. The treatment is practical but scientifically sound Much more space is given to the physical aspects than to ophthalmologic practices, but the latter phase is adequately covered also In the present edition there are 187 figures and an eight-page bibliography which includes references to literature published from about 1850 to 1944.

ELWYN HERMAN

Diseases of the retina. With 170 illustrations, 19 in color Philadelphia The Blakiston Company 1946 587 p. illus (part col d) 24 cm. $10.00 1064

Contents (abridged) Part I, Diseases of retina resulting from disturbances in circulation Arteriosclerosis. Occlusion of central artery and its branches. Obstruction of central vein Spastic contraction of retinal arteries. Essential arterial hypertension. Arteriospastic retinitis. Diabetic retinitis. Retinal changes in diseases of the blood. Traumatic edema of retina. Part II, Diseases of retina resulting from vascular malformations Coats' disease. Sturge-Weber disease. Angiomatosis of retina. Part III, Degenerative diseases of retina on hereditary basis Hyaline bodies of lamina vitrea. Angioid streaks in the fundus Amaurotic family idiocy Retinitis pigmentosa. Congenital night blindness without fundus changes. Tuberous sclerosis. Part IV Inflammatory diseases of retina Retinal changes in septicemia. Retinal changes in subacute bacterial endocarditis. Tuberculosis of retina Syphilis of retina. Part Tumors of retina. Part VI, Diseases of retina leading to retinal detachment. Part VII, Developmental anomalies of retina. Part VIII, Radiation injuries of retina Index

Note Both diseases and pathological conditions of the retina which are commonly associated with systemic conditions, especially of the circulation and the nerves, and diseases which are primarily of the eye and retina, are considered in this comprehensive work. A very large number of conditions and diseases, both common and rare, are described. Diagnosis, especially what the author terms "the clinical picture," is emphasized, but prognosis, treatment, and related subjects also are covered. The discussion of topic is always followed by generous list of references to the pertinent literature.

EPSTEIN, GEORGE J

Strabismus a clinical handbook. Philadelphia The Blakiston Company 1948 214 p. illus. 23 cm. $5 00 1065

Contents Anatomy and physiology of the extraocular muscles. Physiology of binocular vision. Normal muscle balance. Concomitant strabismus. Paralytic strabismus. Strabismus surgery Index.

Note. Although strabismus or cross-eyedness is primarily the concern of the ophthalmologist this very practical manual is written for the guidance of the pediatrician and general practitioner It reviews and outlines present-day clinical methods of examination, diagnosis, and treatment, and discusses the more important theories regarding the causes and pathology of various forms of strabismus. Also included is description of the anatomy and physiology of normal binocular vision, and brief outline of the fundamental surgical techniques which are applied in the correction of this deformity

FULTON JOHN FARQUHAR, AND *OTHERS*, compilers

A bibliography of visual literature 1939–1944 compiled by John F Fulton Phebe M. Hoff and Henrietta T Perkins Prepared by the Committee on Aviation Medicine, Division of Medical Sciences National Research Council, acting for the Committee on Medical Research, Office of Scientific Research and Development, Washington, D C. [Springfield Ill. Charles C Thomas 1945] 117 p. 28 cm. (Yale Medical Library Historical Library Publication no 11) $3.00 1066

Contents Anatomy and ophthalmology Physiology and psychology Visual examination and testing (including methods and instruments) Correction of ocular defects in military personnel. Training for military specialties (including optimal conditions and procedures, job analyses) Ocular trauma (in military services) Goggles and ocular protection Illumination. Visibility Key to abbreviations of journals cited. Index of authors. Index of subjects.

Note The books and articles listed in this international bibliography were selected from the viewpoint of their usefulness in military operations, but the work is not without value in peacetime. Although selective, with special attention to biological aspects, the coverage is broad; and military significance was obviously interpreted liberally There are, for example, ninety some references on the effects of females on vision. Altogether there are more than 1100 references. Approximately 600 periodicals were searched for material. The arrangement is by major topics (as listed above) and sub-topics. The titles of books and articles are given in full in the language of publication.

GIFFORD SANFORD ROBINSON

A hand-book of ocular therapeutics Fourth edition thoroughly revised with 66 illustrations Revised by Derrick Vail. Philadelphia Lea & Febiger 1947 336 p illus. 24 cm. $5.00 1067

Contents Equipment. Anesthetics, narcotics and hypnotics. Drugs and organ extracts used in ophthalmology Specific and non-specific protein therapy Physical therapy Diseases of the lids. Diseases of the conjunctiva. Diseases of the cornea. Diseases of the uveal tract. Diseases of the crystalline lens. Glaucoma. Diseases of the retina. Diseases of the optic nerves and central visual pathways. Diseases of the lacrimal apparatus. Diseases of the orbit. Injuries of the globe Appendix Conditions, the treatment of which is on an experimental or unsatisfactory basis. Index.

Note (2394) In this revision of standard work the intention of the original author to provide practical and concise guide for the diagnosis and treatment of ocular diseases has been retained. New therapeutic agents and antibiotics which have been developed since the previous edition are fully discussed and the chapters on physical

therapy protein therapy and diseases of the retina have undergone considerable revision. As in the earlier edition, only minor surgical procedures are discussed and brief selected bibliographies are given in each chapter. The chapter on disorders of the muscular apparatus has now been omitted.

KRIMSKY EMANUEL

The management of binocular imbalance. 200 illustrations. Philadelphia Lea & Febiger 1948. 464 p illus. 26 cm. $12.50 1068

Contents: The corneal light reflex. Ocular fixation. The positions of gaze. Ocular movements. The physiology of the extraocular muscles. The phoria response. Prisms. The Maddox rod. Binocular image response. Binocular examination. Horizontal binocular imbalance. Vertical imbalance. Neurological considerations. Squint problem in children. Miscellaneous considerations. Prisms in the treatment of binocular imbalance. The stereoscope. The surgical management of binocular imbalance. Authors index. Subject index.

Note. A practical treatise written for the professional ophthalmologist and designed to clarify his understanding of the nature of binocular cooperation, to assist him in making practical examinations, evaluating his findings, and deciding on suitable treatment with lenses, medical or psychological methods, or surgery. The author has developed extensively in his practice and research the use of the corneal light reflex as a means of interpreting binocular imbalance, and to a large extent the volume is a demonstration of the practical value of his method. The 200 illustrations include numerous photographs of eyes exhibiting various types of imbalance. There is a generous number of citations of related literature.

LYLE, DONALD JOHNSON

Neuro-ophthalmology Springfield, Ill. Charles C Thomas 1945 395 p illus. (part col d) 26 cm. $11.50 1069

Contents: Embryological development of the neural structures of the eye. The visual system. The visual cortical areas of the brain and associated tracts and areas. Motor nerves of the eye. The sensory nerve to the eye, orbit and eyelids (trigeminal nerve). The motor nerve to the eyelids and brow (facial nerve). The auditory nerves (acoustic and vestibular). Ocular reflexes. The autonomic nervous system concerning the eye. Arterial vascular system of brain and eye. The venous vascular system of brain, eye and orbit. The cerebrospinal fluid system of the brain. Meningitis and brain abscess. Syphilis of the central nervous system. Encephalitis. Demyelinating disorders. Intracranial and orbital neoplasms. Syndromes which include eye symptoms. Eye manifestations of head injuries. Bibliography. Index.

Note. A concise treatise or reference book in which material from various branches of neurology is brought together for the use of students of ophthalmology and practicing ophthalmologists. Its purpose is to aid in the diagnosis and understanding of intracranial lesions which may produce eye symptoms. Although the author has obviously studied the literature, a great deal of original material is included. There are outlines of 130 case histories, in almost all of which the diagnoses were confirmed by locating and examining the infected lesions. The 214 figures include more than 300 illustrations. Many of these are reproduced from photographs of pathological specimens. There are also numerous drawings. Both the photographs and the drawings, except for a few, were made by the author and are here published for the first time. The bibliography gives 1718 references to books and articles.

MAY CHARLES HENRY

May's manual of the diseases of the eye for students and general practitioners. Nineteenth edition revised and edited by Charles A. Perera. With 387 illustrations including 32 plates, with 93 colored figures Baltimore Williams & Wilkins Company 1947 521 p illus. (part col d) 20 cm. $4.00 1070

Contents (abridged): External examination of the eye by means of inspection and palpation. Subjective or functional examination of the eye. Objective examination of the eye conducted in the dark room. Affections of the eyelids. Diseases of the lacrimal apparatus. Diseases of the orbit. Diseases of the conjunctiva. Diseases of the cornea. Diseases of the sclera. Diseases of the iris. Diseases of the ciliary body. Diseases of the choroid. Perforating wounds of the globe. Intraocular tumors. Glaucoma. Diseases of the vitreous. Diseases of the lens. Diseases of the retina. Diseases of the optic nerve. Amblyopia. General optical principles. Disturbances of motility of the eye. Ocular therapeutics. The ocular manifestations of general diseases. Appendix: Ocular requirements for entrance into the army, navy, marine, coast guard and air services of the United States. Index.

Note. A concise and systematic manual intended for the student and the general practitioner of medicine rather than for the specialist. It has been a standard text since the appearance of the first edition in 1900, and it has been translated into many languages. The eighteenth edition appeared in 1943, the year of the author's death. The reviser of the present edition has retained the original text unchanged except for revisions necessitated by advances in knowledge since 1943. Discussions of penicillin therapy, modern theories of color vision, thyrotropic and thyrotoxic exophthalmos, congenital cataract following German measles, ocular brucellosis are some of the topics on which information has been newly added. Also there are a few changes in illustration, including new fundus drawings in color.

SCOBEE RICHARD GORDON

The oculorotary muscles. St. Louis The C. V Mosby Company, 1947 359 p illus. 25 cm. $8.00 1071

Contents (abridged): Section I, The background of ocular deviations: Anatomy. Synergists, antagonists, yoke muscles. Physiology and mechanics of the oculorotary muscles. Neurophysiology of the oculorotary mechanism. Section II, Latent deviations: The position of rest. Orthophoria. Heterophoria. Esophoria. Exophoria. Hyperphoria. Cyclophoria. Section III, Manifest deviations: Concomitant heterotropia. Noncomitant heterotropia. Section IV, Making the diagnosis: Visual acuity. The angle kappa. Measuring the deviation. Ductions. Vergences. Diplopia fields. Section V, Treatment of the deviation: The nonsurgical treatment of heterotropia. Surgery of specific muscles. Specific testing techniques for the Maddox rod. Index.

Note: A discussion for postgraduate students and beginning practitioners in ophthalmology of the diagnosis and treatment of ocular muscle dysfunction. Diagnostic techniques are presented in great detail. Therapy is presented from the standpoint of the "orthopedic principle" which holds that a paretic muscle is best restored to functioning by weakening its antagonist muscle. There are 113 figures. The bibliography is limited to short lists of references to recent literature.

SELINGER, ELIAS

Office treatment of the eye. Chicago The Year Book Publishers, Inc., 1947 542 p. illus. 24 cm. $8 75 1072

Contents. Chemotherapy and nonspecific and specific protein therapy. Removal of foreign bodies from conjunctiva and cornea. Injuries. Errors of refraction. Imbalance of extraocular muscles and squint. Lacrimal apparatus. The orbit. The lids. The conjunctiva. The cornea. The sclera. The interior refracting media. Glaucoma. The uveal tract. The retina. The optic nerve. Appendix: Iontophoresis with contact lens type and eyecup electrodes. Index.

Note. A manual of the simpler ophthalmologic treatments which may be carried out in the patient's home or the oculist's office. For the benefit of physicians who must treat patients to whom hospital facilities are not available, some procedures are included that are ordinarily carried out in hospitals. The book is addressed primarily to general practitioners and to beginners in ophthalmology. Techniques of examination, diagnosis, and treatment for a wide variety of eye injuries and diseases are described in considerable detail.

WALSH, FRANK B

Clinical neuro-ophthalmology Baltimore The Williams & Wilkins Company 1947 1532 p illus. 26 cm. $18 00 1073

Contents: The visual pathways—diagnosis of lesions situated at different levels. Other cranial nerves—topical diagnosis. The autonomic system. The pupil—normal and abnormal—accommodation. The eyelids and extraocular muscles. Papilledema—optic neuritis—optic atrophy. Congenital and developmental abnormalities and disease of the eyes and central nervous system. Infectious and parasitic invasions of the nervous system and their ocular signs, including an outline of nervous system and ocular syphilis. Heredofamilial and degenerative diseases. Toxic and metabolic diseases. Disorders of muscles. Vascular lesions and circulatory disorders of the nervous system—ocular signs. Ocular and intracranial tumors and related conditions. Injuries by physical agents—ocular signs. Epilepsy, migraine, and other paroxysmal disorders. The ocular signs of hys-

toria, malingering and traumatic neurosis—the psychiatric aspects of ocular disorders. Drugs, poisons, and toxic amblyopias. Index.

Note: An encyclopedic handbook of general and clinical information about diseases (other than "pure" ophthalmologic disorders) in which there are significant ophthalmologic symptoms or features. The material included is not limited to symptomatology. Instead, basic information from anatomy, physiology and neurology is given in appropriate places in the text along with the ophthalmologic material. Excerpts from more than 800 case reports are included, and there are numerous reference lists of pertinent literature. There are about 400 illustrations. The author is Associate Professor of Ophthalmology at the Johns Hopkins University and the book is based largely on experience at the Wilmer Clinic.

WIENER, MEYER

Ophthalmology in the war years. Chicago The Year Book Publishers Inc., 1946–48 2 v 25 cm. Vol. I $13.50 Vol. II $16.00 1074

Contents: Anatomy and embryology by J. J. Prendergast. Aqueous humor by J. S. Friedenwald. Biochemistry, pharmacology and toxicology by D. G. Cogan and W. M. Grant. Color blindness, by L. L. Sloan. Comparative ophthalmology by H. C. Wilder. Congenital anomalies, by A. M. Yudkin. Conjunctiva, by J. G. Bellows. Cornea and sclera, by R. Castroviejo. Electrophysiology, by S. H. Bartley. Experimental pathology by P. C. Kronfeld. General pathology and bacteriology by G. Dvorak-Theobald. Glaucoma, by O. Barkan. Hygiene, sociology, education and history by W. S. Davies. Injuries, by R. J. Masters. Instruments and apparatus, by H. R. Hildreth. The lens, by R. K. Daily and L. Daily Jr. Lids and lacrimal apparatus, by H. F. Whalman. Methods of examination, by L. L. Mayer. Neuro-ophthalmology by F. J. Lebensohn. Ocular muscles, by G. P. Guibor. Orbit, eyeball and sinuses, by W. L. Benedict. Physiologic optics, by H. M. Burian and K. N. Ogle. The pupil, by H. Minsky. Refraction and accommodation, by E. M. Taylor. Retina and vitreous, by H. Luck. Surgery of the eye, by B. Y. Alvis. Systemic diseases, syphilis; parasites, by J. Igersheimer. Therapeutics, by F. C. Cordes and S. D. Aiken. Trachoma, by P. Thygeson. Tumors, by A. B. Reese. Uveal tract, by W. M. James. Indexes.

Note: A critical summary of the international ophthalmological literature published from January 1940 to June, 1944. The years 1940–1943 are covered in Volume I and the remainder of the period is covered in Volume II. Each of the contributing authors describes and discusses the important periodical articles and books which were published in his branch of the science. A bibliography of several hundred entries accompanies the typical review and is keyed to its text. The table of contents as given above is from the first volume; that in the second volume is the same except for minor changes.

PARASITOLOGY AND TROPICAL DISEASES

ASH, JAMES EARLE, AND SOPHIE SPITZ

Pathology of tropical diseases an atlas. 941 illustrations, 15 in color on 257 plates. Philadelphia W B Saunders Company 1945 350 p. illus. (part col d) 27 cm. $10.00 1075

Contents: Virus diseases. Bartonellosis. Rickettsial diseases. Tropical treponematoses. Spirochetal diseases. Dysentery. Bacterial diseases. Leprosy. Fungus diseases. Trypanosomiasis. Leishmaniasis. Malaria. Nematodes. Trematodes. Cestodes. Environmental factors. Deficiency diseases. Tropical ulcer. Ainhum. Index.

Note: The illustrations which make up three fourths of this book consist of hundreds of photomacrographs, numerous clinical photographs both of pathological specimens and of lesions on living patients, a few X ray photographs, some twenty charts picturing the life cycles of certain parasites, and fifteen maps showing the distribution of the diseases discussed. The ninety pages of text provide a condensed account of each disease as to symptoms, occurrence, clinical features, and pathology. References are given at the end of each chapter but no attempt is made to survey the voluminous literature. The authors have drawn on wide army experience in the tropics and on the wealth of specimens collected by the Army Institute of Pathology with which both are associated, the first as Director and the second as Pathologist for Tropical Diseases.

COGGESHALL, LOWELL T, AND OTHERS

The chemotherapy of filariasis. New York The New York Academy of Sciences, 1948 152 p illus. 24 cm (New York Academy of Sciences. Annals. Vol. 50 p 19–170 1948) Paper $2.50 1076

Contents: Filariasis, by L. T. Coggeshall. General experimental methods used in studying filaricides, by R. I. Hewitt. Use of arsenicals in filariasis, by G. F. Otto and T. H. Maren. Treatment of filariasis with anthiomaline (lithium antimony thiomalate) by H. W. Brown. Treatment of filariasis with neostibosan and some other compounds, by J. T. Culbertson. Experimental therapy of onchocerciasis with trivalent antimonials, by F. C. Bartter and others. Tolerance of antimony and arsenic by intensively treated patients, by H. M. Rose. Chemistry of the cyanine dyes, by L. G. S. Brooker. Chemotherapeutic activity of cyanines and related compounds in filariasis in the cotton rat, by H. N. Wright and others. Effect of cyanine dyes on the metabolism of *Litomosoides carinii*, by E. Bueding. Antifilarial action, toxicology and clinical trial of cyanine dyes in filariasis, by L. Peters. The chemistry of piperazine compounds in the chemotherapy of filariasis, by S. Kushner and others. Parasitology of piperazines in the treatment of filariasis, by R. I. Hewitt and others. Some toxicological and pharmacological properties of 1-diethylcarbamyl-4-methylpiperazine hydrochloride, hetrazan, by B. K. Harned and others. The treatment of filariasis bancrofti with 1-diethylcarbamyl-4-methylpiperazine hydrochloride (hetrazan) by D. Santiago Stevenson and others.

Note: The papers presented in this volume were read at a conference, held by the New York Academy of Sciences in October, 1947. Filariasis, a parasitic disease, the chief complication of which is elephantiasis, has been given increased attention after thousands of American soldiers contracted it in the Pacific during World War II. Since control of the infection by means of insecticides and immunization holds little promise of success, the main effort is now being directed toward the discovery of effective drugs. Results of experiments with various chemical compounds on animals and humans are reported in these papers. Brief bibliographies are given at the ends of some of the papers.

CRAIG, CHARLES FRANKLIN

Laboratory diagnosis of protozoan diseases. Second edition, with 56 illustrations and 7 colored plates Philadelphia Lea & Febiger 1948 384 p illus (part col d) 24 cm. $6.50 1077

Contents (abridged): Part I, Laboratory diagnosis of amebiasis and flagellate infections. Part II, Laboratory diagnosis of the leishmaniases—kala-azar, oriental sore and espundia. Part III, Laboratory diagnosis of the trypanosomiases—West African or Gambian sleeping sickness—East African or Rhodesian sleeping sickness—Chagas' disease. Part IV, Laboratory diagnosis of coccidiosis. Part V, Laboratory diagnosis of the malaria plasmodia. Part VI, Laboratory diagnosis of balantidiasis, Balantidium coli. References. Author's index. Subject index.

Note: (3411a) A text and reference book designed for physicians who conduct their own clinical laboratories, for public health officials, and for laboratory technicians. The volume includes those methods for laboratory diagnosis which have proved their value in work with protozoan diseases together with an evaluation of their usefulness. Each section concludes with a "Critique of diagnostic methods" wherein is suggested diagnostic procedure based on the author's own experience. The revisions and changes made in this new edition are due largely to war-time experience and research, especially with regard to quartan malarial fever, amebiasis, and other intestinal flagellate infections. A few references, published since the previous edition (1943) have been added to the nine-page bibliography.

CRAIG, CHARLES FRANKLIN, AND ERNEST CARROLL FAUST

Clinical parasitology. Fourth edition thoroughly revised. Illustrated with 305 engravings and 4 colored plates. Philadelphia Lea & Febiger 1945 871 p. illus. (part col d) 24 cm $10.00 1078

Contents (abridged): Section I, General introduction and orientation. Prognosis, diagnosis and treatment of parasitic infections. Prevention and control of diseases of animal-parasite origin and those transmitted by arthropods. Important landmarks in parasitology. Section II, Protozoa and protozoan infection. The Rhizopoda. The Mastigophora—the intestinal flagellates—flagellates of the mouth and vagina—coprozoic flagellates. The Sporozoa. The Ciliata. Section III, Helminths and helminthic infections. The morphology

biology and classification of the roundworms Nemathelminthes. The aphasmid nematode parasites of man. The phasmid nematode parasites of man. The Gordiacea or "hairworms. The morphology biology and classification of the flatworms (Platyhelminthes) The digenetic trematodes or flukes. The cestodes or tapeworms of man. The leeches (Hirudinea) Section IV Arthropods and human disease: The morphology biology and classification of arthropods of medical importance. Biting lice (Mallophaga) and sucking lice (Anoplura) The flies or Diptera. The fleas or Siphonaptera. Insects causing vesication, urtication and venenation of man. Section Technical appendix. Section VI, The literature of clinical parasitology Author index. Subject index.

Note: (1410) A text for students of medicine and parasitology and reference manual for practitioners and technicians and directors of diagnostic laboratories. The volume presents the essential facts regarding symptoms, methods of diagnosis, treatment, and control of those parasites which provide serious clinical and public health problems. A new chapter on geographical distribution of parasitic infections has been added to this edition and the topic of pathogenesis is now discussed under each important parasite. The sections on arthropod-transmitted infections have been expanded and new preventive techniques are described. A thirty-eight page bibliography constitutes valuable feature of the book.

GOULD SYLVESTER EMANUEL

Trichinosis. Springfield, Illinois Charles C Thomas, 1945 356 p illus. 25 cm. $6.00 1079

Contents: Historical. Life cycle. Morphology Epidemiology Trichinosis in animals Pathology Immunology Laboratory diagnostic methods. Symptomatology Diagnosis. Treatment. Prognosis. Control measures. Bibliography Author index. Subject index.

Note: All aspects of trichinosis which are of interest in medicine, food inspection, and public health are covered in this monograph. The chapters on the clinical aspects are especially full. The work is essentially digest of the world literature pertaining to the subject. The bibliography covers publications issued 1835–1941. Statements in the text are keyed to the bibliography There are approximately 125 figures, of which considerable number are reproduced from microphotographs of trichina-infected tissues.

JAMES MAURICE THEODORE

The flies that cause myiasis in man. Washington, D C. Government Printing Office, 1947 175 p. illus. 23 cm. (United States. Department of Agriculture. Miscellaneous publication no 631) Paper $0.35 1080

Contents Introduction. Types of myiasis. Life histories. Morphology Technique for rearing, preserving, and shipping. Classification of the Diptera. Keys to families of Diptera. The family Sarcophagidae. The family Calliphoridae. The family Gasterophilidae. The family Cuterebridae. The family Hypodermatidae. The family Oestridae. The family Muscidae (including the Anthomyiidae) The family Tipulidae. The family Psychodidae. The family Sylvicolidae The family Stratiomyidae. The family Therevidae. The family Syrphidae. The family Ephydridae The family Drosophilidae. The family Tylidae The family Piophilidae. The family Sepsidae. The family Phoridae. The family Larvaevoridae (Tachinidae) Literature cited. Index.

Note. The families, genera, and species of Diptera responsible for myiasis in man are identified and described in this monograph, myiasis being defined as "the condition resulting from the invasion of tissues or organs of man or animals by dipterous larvae For the families and genera there are general descriptions, followed by keys to aid in identification of both adults and larvae. The species are described under the following headings synonyms, recognition characters, geographical distribution, life history and pathogenesis, and literature. The total known world geographical distribution for each species is given, not merely the geographical distribution of recorded myiasis The bibliography lists 160 references in eight languages.

KUDO RICHARD ROKSABRO

Protozoology with three hundred and thirty-six illustrations. Third edition. Springfield, Ill. Charles C Thomas 1946 778 p illus. 23 cm. $8.00 1081

Contents (abridged) Part I, General biology: Introduction. Ecology Morphology Physiology Reproduction. Variation and heredity. Part II, Taxonomy and special biology: Major groups and phylogeny of Protozoa. Phylum Protozoa—subphylum Plasmodroma—class Mastigophora—subclass Phytomastigina—subclass Zoomastigina—class Sarcodina—subclass Rhizopoda—subclass Actinopoda—class Sporozoa—subclass Telosporidia—subclass Acnidosporidia—subclass Cnidosporidia. Subphylum Ciliophora—class Ciliata—subclass Protociliata—subclass Euciliata—order Holotricha—order Spirotricha—order Chonotricha—order Peritricha—class Suctoria. Collection, cultivation, and observation of Protozoa. Author and subject index.

Note An introduction to the study of the common and representative genera of free-living and parasitic Protozoa, as prepared for graduate and undergraduate students in college zoology courses. The descriptions of genera and species, which constitute the greater part of the volume, are preceded by general discussion of the ecology morphology and physiology of Protozoa. In this edition new chapters have been added on the phylogeny of Protozoa and on methods of collection, cultivation, and observation. The sections on physiology reproduction, and heredity have been revised to incorporate the results of recent research in these fields, and the subject of Protozoa which parasitize man is treated at greater length. New drawings have been added and the chapter bibliographies brought up to date.

MACKIE THOMAS TURLAY AND OTHERS

A manual of tropical medicine prepared under the auspices of the Division of Medical Sciences of the National Research Council by Thomas T Mackie George W Hunter and C. Brooke Worth. 284 illustrations, 6 in color Philadelphia W B Saunders Company 1945 727 p illus. (part col d) 24 cm. $7.50 1082

Contents (abridged) Section I, The virus diseases Section II, Rickettsial diseases. Section III, Spirochetal diseases. Section IV Bacterial diseases. Section Mycotic diseases. Section VI, Protozoal diseases. Section VII, Helminthic diseases Section VIII, Nutritional diseases. Section IX, Miscellaneous conditions. Section X, Medically important arthropods Section XI, Laboratory diagnostic methods. Index.

Note: During World War II the presence of large numbers of United States troops in tropical countries served to focus the attention of American medical men on tropical medicine. This handbook, written for military and naval medical officers charged with the treatment of tropical diseases in both tropical and temperate zones and for students, summarizes in compact and readily accessible form the current information regarding the incidence, transmission, and control of tropical diseases. Each disease is discussed as to distribution, etiology epidemiology pathology, diagnosis, treatment, and prophylaxis. The book is one of series of medical military manuals sponsored by the National Research Council.

RUSSELL PAUL FARR, AND OTHERS

Practical malariology prepared under the auspices of the Division of Medical Sciences of the National Research Council, by Paul F Russell, Luther S. West, and Reginald D Manwell. Foreword by Raymond B Fosdick. 238 illustrations 8 in color Philadelphia W B Saunders Company 1946 684 p illus. (part col d) 24 cm. $10 00 1083

Contents (abridged) Historical introduction. Section I, The parasite: Host range and life cycle. Morphology and physiology of the human plasmodia. Morphology and physiology of the animal plasmodia. Laboratory and field technic. Section II, The mosquito. Section III, The man. Pathology Clinical aspects. Treatment of malaria. Immunity latency and relapse. Blackwater fever Section IV The community The epidemiology of malaria. Climatological factors. Malaria surveys. Section , Prophylaxis and control Control of the parasite. Larvicides. Drainage and filling. Control of adult mosquitoes Control of man. Community control. Malaria control under military conditions. Section VI, Therapeutic malaria. Appendix. Keys to world Anophelines Equivalents. Index.

Note. This important work, which constitutes one of series of military medical manuals sponsored by the National Research Council, provides comprehensive yet concise survey of existing knowledge regarding malaria, its causes, treatment, and control. Although much of the clinical, laboratory and field information here presented is based on work carried out by United States Army Medical teams during World War II, the book is designed primarily to meet civilian needs. It is particularly valuable as basic reference tool and practical field manual for those engaged in combating the spread of malaria in all parts of the world.

SMITH CARROLL NEWTON, AND OTHERS

Biology and control of the American dog tick, by Carroll N Smith Moses M Cole, and Harry K. Gouck. Washington, D C. Government Printing Office 1946 74 p. illus 23 cm. (United States. Department of Agriculture. Technical bulletin no 905) Paper $0.25 1084

Contents Introduction. Economic importance. Distribution. Methods of study Life history Seasonal cycles. Movements of ticks. Hosts. Physiology Control of ticks on animals. Control of ticks on vegetation. Control by treatment of domestic animals. Control by eradication of meadow mice. Control of ticks by burning the grass. Tick parasites. Literature cited.

Note. The American dog tick (*Dermacentor variabilis*) widely distributed east of the Rocky Mountains, is a pest of dogs and a dangerous carrier of Rocky Mountain spotted fever This pamphlet presents a résumé of studies conducted by the Department of Agriculture between 1938 and 1944 at Vineyard Haven, Mass. The biological studies were based upon data of two general types observations on seasonal abundance and activity in nature and developmental potentialities determined by laboratory rearings. In the laboratory rearings a variety of caged mammals were used as experimental hosts, and the nonparasitic stages were maintained under conditions simulating those in nature.

UNITED STATES NATIONAL INSTITUTE OF HEALTH DIVISION OF TROPICAL DISEASES

Studies on schistosomiasis. Washington D C. Government Printing Office, 1947 212 p illus. 23 cm. (United States. Public Health Service. National Institute of Health. Bulletin no 189) Paper $0.50 1085

Contents The geographical distribution and molluscan intermediate hosts of the schistosomes maturing in man, by Willard H. Wright Objectives of research, sources of material, and general methods, by Eloise B. Cram. Snails collected for the schistosomiasis investigations, by Elmer G. Berry Methods of establishing and maintaining snails in the laboratory by Paul A. Ward and others. Experimental molluscan infection with *Schistosoma mansoni* and *Schistosoma haematobium*, by Eloise B. Cram and others. Experimental molluscan infection with *Schistosoma japonicum* by Paul A. Ward and others. Experimental mammalian infection with the schistosomes of man Laboratory animals as source of supply of adult schistosomes and their ova, by Eloise B. Cram and Virginia S. Files. Comparative study of *Schistosoma mansoni* and *Schistosoma japonicum* infections produced by immersion and by intraperitoneal injection, by Eloise B. Cram and William B. Faust. Effects of water treatment processes on schistosome cercariae, by Myrna F Jones and Frederick J Brady Survival of *Schistosoma japonicum* cercariae at various temperatures in several types of water, by Myrna F Jones and Frederick J Brady The effects of sewage treatment processes on ova and miracidia of *Schistosoma japonicum*, by Myrna F Jones and others The effect of chlorine and chloramine on schistosome ova and miracidia, by Myrna F Jones and Morrell S Hummel The protective value of chemically impregnated fabrics against penetration of schistosome cercariae, by M. O Nolan and others. Intradermal and serological tests in patients with schistosomiasis japonica, by John Bozicevich and Helen M Hoyem.

Note A series of scientific papers on some phases of schistosomiasis, most of them accompanied by statistical data and references, this bulletin contains material not published earlier because of security reasons. The studies were carried on over a period of years with the cooperation of the United States Army the United States Navy the Rockefeller Foundation, the Egyptian Ministry of Health, the Chinese National Institute of Health, and the School of Tropical Medicine, San Juan, Puerto Rico Since schistosomiasis is not endemic within the continental United States, it was necessary for the experimenters to import infected animals and molluscan intermediate hosts and to maintain colonies of hosts at the laboratory

UNITED STATES PUBLIC HEALTH SERVICE. MALARIA CONTROL HEADQUARTERS (ATLANTA) AND UNITED STATES TENNESSEE VALLEY AUTHORITY HEALTH AND SAFETY DEPARTMENT

Malaria control on impounded water Washington D C. Government Printing Office 1947 422 p illus. 24 cm. $2 00 1086

Contents (abridged) Malaria and its relation to impounded water. Planning malaria control. Reservoir preparation. Permanent marginal measures. Water level management. Shore-line maintenance. Larviciding. Mosquito-proofing. House-spraying Facilities and operation procedures Malaria mosquitoes. Malariology The relation of plants to mosquito control. Interrelationships of malaria control and wildlife conservation. Personnel training and public relations. Small reservoirs Appendices. Example of hydraulic analysis for prediction of the frequency and duration of flooding in a flood control storage reservoir. Chemicals employed in malaria control. Equipment, tools, and supplies. Design of airplane larviciding equipment. Methods of determining the recovery of larvicides on a water surface. The more important anopheles mosquitoes transmitting malaria in the principal regions of the world with typical breeding places and usually applicable control measures. Malaria survey diagnostic technique.

Note The purpose of this manual is to present the basic principles and the modern practices of malaria control on impounded water It is arranged so as to provide a ready reference for engineers, medical officers, and others concerned with malaria control measures on such impoundments. In considering the various phases of malaria control, such as the epidemiological, engineering, and biological aspects, the volume places emphasis upon their practical application to the problem as a whole.

RESPIRATORY DISEASES

BARACH, ALVAN LEROY

Physiologic therapy in respiratory diseases. 74 illustrations Second edition Philadelphia J B Lippincott Company, 1948 408 p illus. 24 cm $9.00 1087

Contents (abridged) Historical background. Acute anoxia. Additional studies on anoxia and its treatment. Pneumonia. Edema of the lungs War gas poisoning and lung irritants. Bronchial asthma. Obstructive lesions in the larynx, trachea and bronchi. Pulmonary emphysema. Bronchiectasis. Pulmonary embolism and infarction. Massive collapse of the lung. Postoperative atelectasis. Passive pulmonary congestion and congestive heart failure. Accidental asphyxia and resuscitation. Asphyxia of the newborn. Paralysis of the respiratory musculature. Anesthesia and anoxia. Chronic pulmonary tuberculosis. Aerial transportation of patients with pulmonary and cardiac disease. Blast injuries of the lungs. Syndromes characterized by ischemic anoxia. Hiccough. Methods of physiologic therapy including apparatus for inhalational therapy the use of pressure and administration of aerosols. Respirators. Oxygen analyzers. An accurate method for obtaining the oxygen and carbon-dioxide concentration of the inspired air in oxygen masks and other oxygen-therapy equipment. Index.

Note. A handbook for physicians, outlining the principles and practices utilized in the treatment of respiratory diseases and disorders. Techniques of inhalation therapy and other therapeutic measures are considered in detail, with emphasis on the pathologic physiology of each condition. The book is a revision of the author's earlier work, *Principles and practices of inhalational therapy* Philadelphia J B. Lippincott Co., 1944 which has been rewritten to include not only the therapeutic use of gases but also other measures which have value in counteracting clinical disorders of breathing. New chapters on methods of physiologic therapy and syndromes characterized by ischemic anoxia have been added. Bibliographies given at the end of each chapter have been brought up to date.

CHADWICK, HENRY DEXTER, AND ALTON S. POPE

The modern attack on tuberculosis. Revised edition New York The Commonwealth Fund 1946 142 p illus. 21 cm. $1 00. 1088

Contents: Tuberculosis yesterday and today Epidemiological aspects of the disease. Diagnostic procedures The sanatorium as a means of control and treatment. Case finding in the community A community campaign of eradication. Bibliography Index.

Note (1430) The present edition of this handbook, besides incorporating the recent developments in administrative practice and in techniques of tuberculosis control, includes a new section on pathogenesis and a detailed discussion of the various factors which predispose to the development of the disease. Photofluorography and the role of mass X-ray examination in industry and in other groups are discussed, with emphasis on the necessity for an organized

follow-up system. Other important additions include sections on the financial aspects of hospitalization, rehabilitation, chemotherapy and the federal case-finding program. The authors' purpose remains the same, to point the way to more widespread and more effective application of proved techniques in combating tuberculosis

THE CHEST AND THE HEART Section I, The chest, edited by J Arthur Myers Section II The heart, edited by C. A. McKinlay Springfield Ill. Charles C Thomas 1948 2 v illus. (part col'd) $25.50 1089

Contents (abridged) Section I, The chest Part I, Development, anatomy, physiology and examination of the chest. Part II, The pleura, diaphragm, mediastinum, bronchi and chest injuries. Part III, Tumors of the chest. Part IV Non-tuberculous infections of the respiratory tract and allergy Part Non-tuberculous pulmonary conditions, bronchoscopy and pulmonary surgery Part VI, Pulmonary mycoses. Part VII, Air contaminants Part VIII, Tuberculosis Section II, The heart: Part I, The anatomy physiology and examination of the heart. Part II, Congenital heart disease, cor pulmonale and diseases of the great vessels. Part III, The heart in pregnancy; functional cardiovascular disturbances and cardiac arrhythmias, and the heart in thyroid disease. Part IV Infectious heart disease. Part Hypertension and degenerative heart disease. Part VI, Prevention and treatment of heart disease. Appendix. The pathogenesis of tuberculosis. Index.

Note: Fifty-nine of this country's medical authorities have collaborated to prepare this comprehensive work on the diseases of the chest and the heart. Intended especially for the guidance of practicing physicians and for the use of students in this special field, each chapter provides concise review of modern knowledge regarding methods of examination, diagnosis, and treatment of the diseases and conditions discussed. Surgical techniques are also described and, where necessary detailed studies of embryology anatomy and physiology are included. Although some historical material is provided, the greater part of the book is based on the experience of the authors. Chapter bibliographies are included.

DERBES VINCENT DE PAUL JOSEPH, AND HUGO TRISTRAM ENGELHARDT

The treatment of bronchial asthma. With chapters by a panel of contributors. 61 illustrations. Philadelphia J B Lippincott Company 1946 466 p. illus. 24 cm. $8 00 1090

Contents Part I, Orientation: History of bronchial asthma, by R. H. Major. Definition and classification, by H T Engelhardt and V J Derbes. Statistics of bronchial asthma, by L. I. Dublin and H. H. Marks. Predisposing and contributing factors, by V J. Derbes and H. T Engelhardt. Anatomy and physiology of respiratory tract, by O. E. Burch. Pathology of bronchial asthma, by H. T Engelhardt and V J Derbes. Immunology of bronchial asthma, by M B. Cohen. Climatic and weather effects, by C. A. Mills. Part II, Clinical aspects: Description of the disease, by V J Derbes and H. T Engelhardt. Methods of testing, by H. T Engelhardt and V J Derbes. The house-dust factor by S. O. Rinso. Pollen and fungus-spore factors, by O. C. Durham. The role of foods in production of bronchial asthma, by F W Wittich. Bacteria, epidermal substances, and miscellaneous precipitating factors, by V J Derbes and H. T Engelhardt. Parasitic agents in causation of asthma, by E. C. Faust. Rhinolaryngologic aspects of bronchial asthma, by M D. Fabricant. Psychogenic factors in bronchial asthma, by T M. French. Differential diagnosis, by W A. Sodeman. Allergic treatment, by H T Engelhardt and V J Derbes. Nonallergic treatment, by J S. La Due. Surgical treatment, by A Ochsner Complications of bronchial asthma, by V J Derbes and H. T Engelhardt. Cardiac asthma, by P D. White. Index.

Note A concise presentation of present-day knowledge and techniques of diagnosis and treatment. It is intended for the information of general practitioners rather than specialists. Most of the chapters are short and well organized, and are supplemented by brief, selected literature lists. Although the emphasis is on allergic method of treatment, other methods are also presented, as indicated in the table of contents.

DRINKER, CECIL KENT

Pulmonary edema and inflammation an analysis of processes involved in the formation and removal of pulmonary transudates and exudates. Cambridge, Mass. Harvard University Press 1945 106 p illus. 22 cm. (Harvard University monographs in medicine and public health) $2.50 1091

Contents: The relation of lung structure to edema and inflammation. Physiological factors in pulmonary edema and inflammation. Breathing movements and pulmonary edema. Preventive and therapeutic measures in asphyxiating pulmonary disease. Artificial respiration.

Note: The first four chapters, which comprise the major portion of this monograph, originated as series of lectures presented at the Bowman Gray School of Medicine in Winston-Salem, North Carolina. Based on the author's clinical experience and experimental work, they discuss the various anatomical and physiological factors which account for the formation of excessive fluid in the lungs, and methods which have been adopted for relieving this condition. The final chapter is cogent examination of theories and methods of artificial respiration. In it the author stresses the importance of Hering Breuer reflex mechanism, and also reviews briefly some of the mechanical respirators now in use.

GAY LESLIE NEWTON

The diagnosis and treatment of bronchial asthma with a foreword by Warfield T Longcope. Baltimore, Md. The Williams & Wilkins Company 1946 334 p illus. 23 cm $5.00 1092

Contents. The physiology of normal respiration and the asthmatic state. The etiology of asthma. The pathology of asthma. The diagnosis of bronchial asthma. Complications and differential diagnosis of bronchial asthma. Asthmatic paroxysms due to psychosomatic disturbances. The treatment of asthma.

Note A practical treatise aimed at advanced medical students, interns, and general practitioners of medicine. The importance of making comprehensive examinations of patients suffering from shortness of breath is emphasized. Conflicting theories regarding the disease are discussed, and numerous case histories are included to illustrate methods of diagnosis and treatment. The chapter on treatment is about 130 pages in length. In it the author describes not only the practical, scientific therapies, but also discusses those whose value is questionable and shows why they are ineffective. The author is Director of the Allergy Clinic of the Johns Hopkins Hospital.

HAYES EDWARD WILLIAM

Tuberculosis as it comes and goes with chapters by Laurence de Rycke. Second edition. Springfield Ill. Charles C Thomas, 1947 220 p illus. 23 cm. $4.50 1093

Contents (abridged) History The tubercle bacillus. Theories of infection. Control of infection. Classification. Diagnosis. Treatment. Diet. Climate Heliotherapy Mechanical therapy The use of drugs in treatment. Complications. Pulmonary hemorrhage. Pregnancy and tuberculosis. Prognosis. Rehabilitation. Suggestions to patients, by Laurence de Rycke. Suggestions to visitors, by Laurence de Rycke. Bibliography Index.

Note: The purpose of this little volume is to provide the tubercular patient with general knowledge of the cause and nature of tuberculosis so that he may cooperate fully with the physician during his course of treatment. Physicians and tuberculosis workers will also find the volume source of reliable information regarding the disease. The author writes from his experience both as physician specializing in tuberculosis and as former tubercular patient. In this edition two new chapters have been added, which emphasize the need for the development of favorable and thus peaceful mental attitude.

KRAETZER, ARTHUR FURMAN

Procedure in examination of the lungs with especial reference to the diagnosis of tuberculosis. Third edition Revised and with a preface by Jacob Segal. New York Oxford University Press 1947 150 p illus 21 cm. (Oxford medical publications) $3.50 1094

Contents: The actual sounds. The examination of the chest. Inspection. Palpation. The heart in relation to pulmonary examination. Percussion. Auscultation. Diminished intensity of breath-

sounds. Broncho-vesicular and bronchial breath-sounds. Rales. The signs of tuberculosis. Appendix: Auscultation. Bronchoscopy. Bronchography. Laboratory tests. X-ray commentary. Sample technique in differential diagnosis. Index.

Note. This book is known as a simple, well-organized textbook. Originally it dealt with the physical examination only but some material on the use of the X-ray has now been added. In the opinion of the reviser of the present edition, the original text cannot be improved upon as a simple, basic introduction to physical examination of the lungs. Accordingly he has not changed the original chapters, but instead has added to the appendix short statements on new techniques and other developments which the undergraduate student should learn. Among the additions are short discussions of "the wheeze," tuberculin tests, bronchoscopy and the interpretation of roentgenograms.

PINNER, MAX

Pulmonary tuberculosis in the adult: its fundamental aspects. Springfield, Illinois, Charles C Thomas, 1945. 579 p. illus. 23 cm. $8.50 1095

Contents (abridged): The tubercle bacillus. Histogenesis. Immunological principles with an appendix on immunization. Tuberculin. Classification of pulmonary tuberculosis. Primary complex and some remarks on tuberculosis in children. Fundamental aspects of the course of pulmonary tuberculosis. Typical lesions of pulmonary tuberculosis with casuistic examples. Tuberculous tracheobronchitis. Diagnostic principles. Clinical laboratory procedures. Physiological and pathological principles of pulmonary collapse. Medical treatment. Collapse therapy. Evaluation of results of treatment. General references. Author index. Subject index.

Note. Although this volume is not planned for use as a text, its comprehensive and practical discussion of the whole problem of pulmonary tuberculosis makes it of value to both the medical student and general practitioner. The author, who is editor of the *American review of tuberculosis*, has not attempted to emphasize any particular phase of the subject, but instead gives a broad picture of the fundamental aspects of the pathology, physiology, immunology and bacteriology of tuberculosis. The annotated bibliographies given at the end of each chapter constitute an important feature of the book.

POTTENGER, FRANCIS MARION

Tuberculosis: a discussion of phthisiogenesis, immunology, pathologic physiology, diagnosis and treatment. St. Louis, The C. V. Mosby Company, 1948. 597 p. illus. 25 cm. $12.00 1096

Contents: Phthisiogenesis. Major pathologic processes in tuberculosis. Clinical tuberculosis in childhood. Immunization against tuberculosis. The visceral neurology of pulmonary tuberculosis. Diagnosis of pulmonary tuberculosis. Complications of pulmonary tuberculosis. Classification of pulmonary tuberculosis. Spontaneous healing of tuberculosis. Treatment of pulmonary tuberculosis. The application of diagnostic and therapeutic principles in clinical practice with illustrative cases. Future program. Authors index. Subject index.

Note. The author of this comprehensive work has had extensive experience with tuberculosis and has published many papers on the subject. As he, himself, indicates in his preface, some of his views are at variance with accepted ideas. For example, he looks upon the disease as only mildly infectious and believes that most cases are curable. He stresses the importance of measures which will encourage the spontaneous healing of lesions, but also he devotes a long chapter to compression therapy. The book is concluded with a strong plea for wide use of BCG. There are over 100 illustrations and forty long lists of references.

ROSEBURY, THEODOR

Experimental air-borne infection. With the co-authorship and assistance of the staff of the Laboratories of Camp Detrick, Maryland. Baltimore, The Williams & Wilkins Company, 1947. 222 p. illus. 23 cm. (Microbiological monographs, official publication of the Society of American Bacteriologists) $4.00 1097

Contents (abridged): Section I, Introductory: Scope of the project. Historical background. Section II, Equipment and methods: Special equipment and apparatus. Methods. Precision of the methods. Section III, Criteria for the selection of an atomizer for the production of clouds of labile agents: Atomizers in general. The atomization of labile agents. Data from comparative studies of atomizers. Construction, calibration and use of Chicago atomizers. Section IV, Miscellaneous basic data. Cloud sampling devices. Studies of animal coat contamination. Section V, Stability and infectivity of a group of bacteria and viruses: Brucella suis. Pasteurella tularensis. General data on studies with viruses. Comparative stability and infectivity. General summary. References. Index.

Note. During the years 1944 and 1945 a wartime project was conducted at Camp Detrick, Maryland, for the study of experimental air-borne infection. This volume provides a detailed report of the methods and results of this experiment. Emphasis is placed on the equipment devised for the project and on the research techniques but data are also presented relating to experiments with six species of bacteria and four strains of the psittacosis group of viruses. The author stresses the fact that the findings are entirely preliminary and should not be considered conclusive or final.

RUBIN, ELI HYMAN

Diseases of the chest, with emphasis on X-ray diagnosis. The principles of surgical treatment, by Morris Rubin. 355 illustrations with 24 plates in color. Philadelphia, W. B. Saunders Company, 1947. 685 p. illus. (part col'd) 25 cm. $14.50 1098

Contents (abridged): Section I, Diagnosis: Roentgenology. Symptoms and signs of lung disease. Section II, Acute and chronic pneumonias. Acute bacterial pneumonias. Viral pneumonias of known and unknown origin. Suppurative pneumonias. Pulmonary diseases caused by higher bacteria and fungi. Pulmonary diseases of chemical and physical origin. Section III, Pulmonary tuberculosis: Forms of pulmonary tuberculosis. Diagnosis of pulmonary tuberculosis. Complications of pulmonary tuberculosis. Treatment of pulmonary tuberculosis. Surgical treatment of pulmonary tuberculosis. Section IV, Diseases of the lungs and bronchi. Bronchial obstruction. Bronchiectasis. Pulmonary emphysema. Pulmonary cysts. Bronchial asthma. Pulmonary neoplasms. Section V, Diseases of the mediastinum, diaphragm, pleura, and related structures, including heart-lung diseases. Section VI, Principles of surgical treatment. Preoperative and postoperative care. Surgery of empyema, lung abscess and bronchiectasis. Surgery of pulmonary neoplasms and tuberculosis. Emergencies of the chest. Index.

Note. A concise and practical introduction to diseases of the chest as written for general practitioners, students, radiologists, and others who are not specialists in the field. The book as a whole, and the section on surgical treatment in particular, will also be of interest to the surgeon. The emphasis placed on X-ray diagnosis and the inclusion of many illustrations of roentgenograms result from the author's belief in the importance and value of this method of examination and interpretation. The discussion of each disease includes material on etiology, pathology, clinical features, symptoms, roentgenology and other special mechanisms of examination, as well as rather thorough descriptions of therapeutic methods currently available. Extensive bibliographies follow each main section.

UNGER, LEON

Bronchial asthma. Introduction by Morris Fishbein. Springfield, Ill., Charles C Thomas, 1945. 724 p. illus. (part col'd) 25 cm. $10.50. 1099

Contents (abridged): Part I, Clinical section. The language of allergy. The history of bronchial asthma. Etiology of bronchial asthma. Exciting factors. Pathology of bronchial asthma. Symptomatology of bronchial asthma. The diagnosis of bronchial asthma. Prevention of asthma in children of allergic parents. Specific treatment of bronchial asthma. Results of treatment of bronchial asthma. The military aspects of bronchial asthma and other allergic conditions. Part II, Laboratory section. Preparation of extracts. Technic of pollen and mold counts. Technic of estimation of leucopenic index. Part III, Appendices. Sources of allergens. Information and special instructions for patients. Instructions to avoid house dust. Instructions for making impervious covers. Elimination diets and food diaries. Instructions for physical exercises for asthma. Oral hyposensitization to foods. Index.

Note. A comprehensive treatment in which etiology, diagnosis, and treatment are emphasized. The clinical section accounts for the bulk of the text. It introduces the reader to the terminology and history of the disease before entering upon the fundamental discus-

sion of its etiology exciting factors, pathology symptomatology diagnosis, and treatment. Particular stress is placed on the importance of specific diagnosis, including skin tests, and specific treatment. Every chapter is summarized and accompanied by bibliographical references. Most extensive are the bibliographies referring to nonspecific treatment of allergies, pathology of bronchial asthma, and inhalants. A special feature is a chapter on the military aspects of allergies, which includes a report on allergic factors in various countries. There are about 120 illustrations, numerous bibliographies, and much useful supplementary information such as the tabulation of sources of allergies.

VENEREAL AND GENITOURINARY DISEASES

CONFERENCE ON PROBLEMS OF HUMAN FERTILITY

Proceedings, Conference on Diagnosis in Sterility sponsored by the National Committee on Maternal Health. Edited by Earl T Engle. Springfield Ill. Charles C Thomas, 1946 237 p. illus. 24 cm. $6 00 1100

Contents: The semen specimen—laboratory examination, by J MacLeod. Clinical interpretation of the semen analysis, by F A. Simmons. The testicular biopsy—a five-year survey by C. W Charny The role of the accessory glands in fertility by C. Huggins. Chronic hemospermia—origin of the bleeding and treatment with estrogens, by D F McDonald. Diagnosing the endometrial biopsy by A. T. Hertig. Interpretation of the basal body temperature curves, by P Tompkins. Interpretation of post-coital examinations of cervical mucus, by W W Williams. History taking for the infertile couple, by W H. Cary An interpretation and evaluation of tubal patency tests, by N F Miller. Reflections on working hypothesis concerning mechanism of sterility by A. T Kenyon. So-called "pelvic congestion in relation to sterility by H. C. Taylor Jr Summary of the conference, by J. Rock.

Note: The papers collected in this volume do not add up to comprehensive review of the current knowledge of human sterility, but they do give cross-section of significant recent studies and also of the current methods of outstanding specialists in its treatment. There is considerable emphasis on basic research and laboratory studies, but enough is included on clinical techniques to make the book valuable both to gynecologists and general practitioners. Each paper is accompanied by report of the discussions which followed its reading and, usually selected bibliography

FRAZIER, CHESTER NORTH AND LI HUNG-CHIUNG

Racial variations in immunity to syphilis a study of the disease in the Chinese, White and Negro races. Chicago The University of Chicago Press, 1948 122 p illus. 24 cm. $2.50 1101

Contents: Prevalence of syphilis in China. Literature Constitution and environment. Description and sampling of cases Plan of study: Chronology of clinical progression. Racial characteristics of syphilis. Racial pattern of associated clinical phenomena. Characteristics of syphilis in males and females Nature and meaning of the racial differences. Appendix. Bibliography Index.

Note The report of an investigation which had as its purpose the collection of information on the comparative incidence and manifestations of syphilis in White, Negro, and Chinese populations. As in earlier comparative studies of Whites and Negroes, it was found that the basic pattern of the disease is essentially identical, but that the relative frequency of certain typical manifestations varies racially and sexually The data presented were gathered by analyzing 14,845 cases of syphilis in the three races.

HEALTH PUBLICATIONS INSTITUTE INC.

Recent advances in the study of venereal diseases a symposium. Held under the auspices of the Syphilis Study Section, Division of Research Grants and Fellowships, National Institute of Health, U S. Public Health Service in the auditorium of the U S Department of Commerce, Washington, D C., April 8–9, 1948 Chairman, Syphilis Study Section J E. Moore. Raleigh, North Carolina Health Publications Institute, Inc., 1948 341 p. illus. 23 cm. $1.50 1102

Contents (abridged) Experimental syphilis: The rate of multiplication of *Treponema pallidum* in normal and immune animals, by M. C. Cumberland and T B Turner Phenomena of disease in rabbits fed cholesterol and infected with *Treponema pallidum*, by C. N Frazier and others. The organ distribution of the infectious agent of syphilis in the mouse, by P D Rosahn and others. Serologic tests for syphilis: Cardiolipin-lecithin-cholesterol antigen for use in the Kahn test ..., by R. L. Kahn. Early syphilis The therapeutic efficacy of aqueous penicillin in early syphilis, by J F Mahoney and others. Penicillin in early syphilis, by F W Reynolds. Jarisch-Herxheimer reaction Morphologic changes in syphilitic lesions during the Herxheimer reaction, by W H. Sheldon and A. Heyman. The Jarisch-Herxheimer reaction in neurosyphilis treated with penicillin, by M. T Hoekenga and T W Farmer Gonorrhea: Penicillin in the treatment of uncomplicated gonorrhea, by A. King. Neurosyphilis: Long term results in neurosyphilis treated with penicillin alone by J H. Stokes and others. The treatment of neurosyphilis with combination of malaria and penicillin, by R. R. Kierland and others. Primary optic atrophy: Penicillin in the treatment of primary optic atrophy by J V Klauder Forty cases of primary optic atrophy critically studied from the standpoint of diagnosis and therapy by W O. LaMotte, Jr. Miscellaneous manifestations of syphilis: Treatment of infantile congenital syphilis, by E. K. Rose and others. Results of treatment of over one hundred contacts of patients with early syphilis with "one day abortive cure, by L. J. Alexander and A. G. Schoch. Other venereal diseases: The epidemiology of granuloma inguinale, by G. W Rake. Experimental pinta, by F L. Blanco. Pharmacology and experimental therapeutics: The pharmacology of procaine penicillin, by H. Welch and H. L. Hirsh. Treatment of early syphilis with procaine penicillin G in oil, by H. L. Hirsh and others. Oral administration of bacitracin, by G. C. Bond and others.

Note: The papers comprising this volume were presented originally at conference held in April, 1948 under the auspices of the United States Public Health Service. Each paper has been prepared by specialist in the field of venereal disease, and describes some phase of medical, chemical, or biological research relating to the diagnosis and treatment of these diseases. Particular attention is devoted to recording the results obtained when penicillin was employed as method of treatment. There is no index.

HUDSON ELLIS HERNDON

Treponematosis. Edited by Henry A. Christian. Reprinted from Oxford loose-leaf medicine with the same page numbers as in that work. New York Oxford University Press 1946 122 p 24 cm. (Oxford medical publications) $2 50 1103

Contents (abridged) Historical review Studies in diagnosis. The "syphilids. Summary and conclusion. Bibliography

Note A general survey of the diseases caused by treponemes, which include syphilis and numerous less well-known diseases. The history of our knowledge of these diseases is emphasized, and the evidence bearing on the controversy as to whether Columbus brought syphilis back to the Old World from America is critically examined. In the part titled "Studies and diagnosis" the author piles up evidence in support of the claim that this supposed family of diseases is the same disease which takes on different forms in various parts of the world. The work is heavily documented with references to the literature sources from which it has been drawn.

KAHN REUBEN LEON

Technique of the standard Kahn test and of special Kahn procedures. Revised and enlarged edition. Ann Arbor Michigan University of Michigan Press, 1946 55 p. illus. 23 cm. Paper $0.25 1104

Contents: Apparatus. Reagents. Standard Kahn procedure. Special Kahn procedures. Appendix: Preparation and standardization of antigen and special notes.

Note The Kahn test is method for determining the presence of syphilis through the utilization of blood serum and spinal fluid. This little manual describes the apparatus required and outlines the procedures and methods of interpretation which should be followed

to obtain dependable results in the test. Methods for obtaining the serum and spinal fluid are not described. Detailed discussions of the principles underlying the procedures are presented in the author's *The Kahn test—a practical guide*, Baltimore, Williams and Wilkins Co 1928.

LeComte, Ralph Michael

Manual of urology Fourth edition Baltimore The Williams & Wilkins Company 1948 311 p illus 23 cm. $4 00. 1105

Contents: Methods of examination. Symptomatology. Methods of treatment. Surgical diseases of the kidneys. Diseases of the bladder. Diseases of the prostate. Diseases of the seminal vesicles. Diseases of the urethra. Diseases of the penis. Diseases of the scrotal contents. Impotence and sterility in the male. Literature. Index.

Note (2463b) A brief and reliable introduction to the subject which is designed for medical students and others in the medical profession who need an understanding of urology but have not time to study an exhaustive textbook. It covers the fundamentals of the subject including the difficult anatomy and the standard instruments and procedures. The work has not been radically revised in the present edition, but a fair amount of new material has been added. For the most part this material is concerned with advances in chemotherapy. The bibliography has been revised.

Merritt, Hiram Houston and others

Neurosyphilis, by H Houston Merritt, Raymond D Adams and Harry C. Solomon. New York Oxford University Press 1946 443 p. illus 24 cm. (Oxford medical publications) $11 00 1106

Contents: General considerations. Classification of neurosyphilis. Meningeal neurosyphilis (cerebral). Asymptomatic neurosyphilis. Cerebral vascular neurosyphilis. Meningeal and vascular syphilis of spinal cord. Paretic neurosyphilis. Tabetic neurosyphilis. Congenital neurosyphilis. Puzzles and errors. Trauma and neurosyphilis. Cerebrospinal fluid. Treatment. Index.

Note A comprehensive study in which the authors have written from the viewpoint of neurologists and psychiatrists, but have stressed the clinical aspects, especially the modern methods of medical treatment. Its most valuable feature is the inclusion of a large amount of case material obtained mainly from the Neurosyphilis Clinic and Neurological Unit of the Boston City Hospital and Neurosyphilis Clinic and wards of the Boston Psychopathic Hospital. Details from the case histories cover history, examination, laboratory findings, treatment, and the progress or outcome, and the authors' own valuable comments. Their chapter "Puzzles and errors," points up by means of case histories the difficulties of accurate diagnosis and prognosis. In addition to the case material, the book contains good discussions of the history, microscopic pathology, clinical manifestations, and prognosis of each type of manifestation of neurosyphilis. There are approximately 80 tables of data, most of which summarize laboratory findings and other information derived from the same group of cases. Good bibliographies are appended to the chapters.

Moore, Joseph Earle

Penicillin in syphilis Springfield, Ill. Charles C Thomas, 1946 319 p illus. 24 cm. $5.50 1107

Contents: Introduction. Penicillin and its chemistry. The pharmacology of penicillin in relation to its use in syphilis. The toxicity of penicillin in animals and man. The activity of penicillin against various infections in vivo and in vitro. Penicillin in experimental syphilis. The mechanism of action of penicillin and its implications in syphilis. Penicillin administered for other purposes as a source of confusion in the diagnosis of syphilis. Penicillin in the treatment of early syphilis. Penicillin in the treatment of early syphilis, resistant to arsenic and bismuth. Penicillin in the treatment of latent syphilis. Penicillin in the treatment of benign late (gummatous) syphilis, including hepatic syphilis and acute syphilitic nephrosis. Penicillin in the treatment of cardiovascular syphilis. Penicillin in the treatment of ocular syphilis. Penicillin in the prevention of prenatal syphilis by treatment of the syphilitic pregnant woman. Penicillin in congenital syphilis. Penicillin in neurosyphilis. The post treatment observation of syphilitic patients treated with penicillin. Streptomycin in syphilis. Author index. Subject index.

Note (2448) The general practitioner will find this volume a valuable supplement to the author's *Modern treatment of syphilis*, Springfield, Charles C Thomas, second ed. 1941. It serves as a practical guide to current practices in the use of penicillin in syphilis, as developed up to the time of publication. Almost half the space is devoted to basic information concerning the chemistry, pharmacology and therapeutic action of penicillin. The remaining chapters, which describe clinical methods and procedures of treatment, are based on information derived from a nation-wide study conducted by 44 cooperating groups and clinics. The author states that the references given at the end of each chapter constitute an exhaustive bibliography of the subject through October 1944.

Ockerblad Nelse Frederick

Urology in general practice. Chicago The Year Book Publishers Inc. 1947 392 p illus. 21 cm. (The general practice manuals) $6.25 1108

Contents: Urologic diagnosis. Catheters and sounds—their uses and dangers. Infections of the kidney—exclusive of tuberculosis and gonorrhea. Nephritis. Kidney ptosis. Genito-urinary tuberculosis. Hydronephrosis. Tumors and cysts of the kidney. Injuries to the kidney. Anomalies of the genito-urinary tract. Urinary lithiasis. The ureters and their diseases. The urinary bladder and its diseases. Diseases of the prostate and seminal vesicles. Carcinoma of the prostate. Diseases of the external male genitalia. Diseases of the male urethra. Diseases of the female urethra. Sterility and impotency. The sulfonamides and antibiotics in urology. Gonorrhea. Index.

Note (2470) A simply written text designed to help the general practitioner manage the emergencies and other cases in this specialty which present themselves in his practice. Emphasis is put on the genitourinary diseases most frequently encountered. Treatments which can be carried out in the doctor's office are described in precise detail. In revising the work for this edition significant changes were made. The former section on nephritis has been condensed. Because the sulfa drugs and penicillin have largely transferred the treatment of gonorrhea from specialists in urology to general physicians, the chapter on this disease has been thoroughly revised. The original chapter on the sulfonamides has been enlarged to cover penicillin and streptomycin. In spite of the comparative brevity of the work, there are now almost 100 illustrations.

Rosahn Paul Dolin

Autopsy studies in syphilis a monograph. From the Department of Pathology Yale University School of Medicine and the Laboratories of the New Britain (Connecticut) General Hospital. Aided by a grant from the Venereal Disease Division of the United States Public Health Service. Washington, D C. Government Printing Office 1947 67 p illus. 23 cm. (Supplement no 21 to the Journal of venereal disease information) Paper $0.25 1109

Contents: Introduction. Review of the incidence of syphilis in autopsies on adults. Materials and methods of analysis of Yale autopsy protocols. Fibrosis and round cell infiltration of the parenchymatous organs (Warthin) in the tissue diagnosis of syphilis. Mortality and morbidity findings in the Yale autopsy series. The relation between blood serologic tests and anatomic lesions at autopsy. Fibrosis and round cell infiltration of the parenchymatous organs (Warthin) in relation to serodiagnostic findings. The end results of untreated syphilis. Résumé and recommendations. Appendix: Code for syphilis study. References.

Note The basis for this study consisted of 3900 autopsies performed in the Department of Pathology at the Yale University School of Medicine since 1917. The various papers reporting the results of the investigation, some of them written jointly by the author and Bernard Black-Schaffer, are here reprinted with changes and additions from the journals in which they originally appeared.

Trussell Ray E

Trichomonas vaginalis and trichomoniasis. With an introduction by E. D Plass. Springfield Ill Charles C Thomas, 1947 277 p. illus. (part col d) 23 cm. $6 00 1110

Contents (abridged) Part I, Trichomonas vaginalis. Morphology. Growth requirements. Culture media. Viability and the effect of physical and chemical agents. Pathogenicity. Classification and the question of the identity of species. Part II, Trichomonas vaginalis

inhabitant. Sites and incidence of infection. Sources of infection—methods of transmission—prevention. Duration of infection. Prognosis. Laboratory diagnosis. Clinical findings associated with *Trichomonas vaginalis*. *Trichomonas vaginalis* and puerperal morbidity. *Trichomonas vaginalis* and abortion. Part III, Treatment: Alphabetical index and discussion of chemicals utilized in efforts to eradicate *Trichomonas vaginalis*. Bibliography. Index.

Note: A monographic survey of the current knowledge of this parasite. In addition to incorporating all of the experimental work of the author and his colleagues, the literature has been reviewed and digested, with references from the text to the numbered bibliography. The number of references in the bibliography, 1384, is indicative of the scope of the work. Included is a long, alphabetically-arranged list of drugs which have been tried. Results with these drugs which have been reported in the literature are summarized briefly. In his preface the author points out that the book does not contain the final answer to the medical problems caused by this parasite.

VONDERLEHR, RAYMOND ALOYSIUS, AND J R. HELLER, JR.

The control of venereal disease. Foreword by Thomas Parran New York Harcourt, Brace and Company 1946 246 p illus. 20 cm. $2 75 1111

Contents: How the fight began. Syphilis—cause and effect. Gonorrhea and "minor venereal diseases." Doctors know how to win. What penicillin does. Finding the case. Prostitution, obstacle to success. "The revolving door." Delinquency and venereal disease. War points up world problems. Present-day control measures. The goal is prevention. Venus and psyche. Where do we stand? What next? Index.

Note: Two officers of the United States Public Health Service present here a concise report on the status of venereal disease in the country today. There are brief accounts of the nature, history and treatment of syphilis and gonorrhea, but the bulk of the work is devoted to an account of current methods of diagnosis and treatment and an outline of the procedures necessary for nation-wide control. Guided by the relatively excellent results achieved during the last war, the authors propose two major approaches to the problem: the kind of mass blood testing ("serological dragnet") conducted already in a few cities and the tracking down of contacts to check the spread of venereal disease at its source. The difficulties of neither of these techniques are minimized, but the authors feel that with public support and present methods of treatment both can be effectively employed, with good hope of eradication of the present national menace. Although the message will probably be most readily appreciated by social workers and medical specialists, the book is written for the general public and is simple, direct, and graphic in presentation.

YEAR BOOK OF UROLOGY

The 1948 Year book of urology edited by Oswald S Lowsley Chicago Year Book Publishers Inc., 1948 445 p illus. 19 cm. (The practical medicine year books) $4 75 1112

Contents: General considerations. The kidney and adrenal. Peri- and paranephric conditions. The ureter. The bladder. Transurethral operations. The prostate. The genitalia. Gonorrhea. Index. Index to authors.

Note: (1478) This annual is similar in scope and organization to the other volumes in the same series. Under each of the chapter headings noted in the contents a series of comparatively long abstracts are presented. These abstracts give the essence of several hundred significant articles selected from medical periodicals published throughout the world. Some of the abstracts are supplemented by brief evaluatory notes written by the editor. References are given to the original publication. There is a generous number of illustrations and a full index.

ALLERGY

COCA ARTHUR FERNANDEZ

Familial nonreaginic food-allergy Second edition. Springfield Charles C Thomas 1945 191 p illus. 23 cm. $4.50 1113

Contents (abridged): Classification of allergic disease. Practical management of idioblaptic allergy. The art of interpreting the pulse-dust. The biologic grouping of food-allergens. List of foods and drugs arranged according to botanical origin, by A. Sumner Price. Sympathectomy as an aid in the relief of familial nonreaginic food-allergy. The mechanism of idioblaptic allergy. The histamine theory. Histaminase therapy. The statistical method of investigating whether a certain pathological condition is a symptom or consequence of idioblaptic allergy. The relation of idioblaptic allergy to hypertension. Idioblaptic allergy as a predisposing cause of common cold. The incidence of idioblaptic allergy among persons affected with cancer of the breast. Index of authors. Index of subjects.

Note: (1482) In this book the author, who is Medical Director of the Lederle Laboratories, is concerned with a relatively large group of allergic conditions and a number of other disorders hitherto unrecognized as allergic, all of which are characterized by lack of reaction in the usual skin tests. It is his belief that 90 per cent or more of the white population are affected with this type of allergy. He states that it can be detected by an acceleration of the heart-beat which follows ingestion or inhalation of the material which excites the allergic syndrome. He believes further that idioblapsis (as he terms this kind of allergic disease) to be the primary cause of non-infectious disease and a predisposing cause of some infectious diseases; and that the condition has a hereditary basis. In the preface to the present edition he acknowledges that his theories and conclusions have not as yet been widely accepted by the medical profession. This edition is approximately thirty pages longer than the first; and in preparing it several parts of the original were extensively rewritten and reorganized.

COOKE, ROBERT A., AND OTHERS

Allergy in theory and practice. Philadelphia W B Saunders Company *1947 572* p illus. (part col d) 24 cm. $9 75 1114

Contents: Section I, Fundamental aspects of allergy: Principles and theory. Special serologic features of the immediate wheal reacting allergies. Pathologic-anatomic aspects of allergy, by Paul Klemperer. Immuno-chemistry of antigens and antibodies, by Michael Heidelberger. Section II, Allergy of the bronchi (asthma): Non-infective asthma, by W. C. Spain. Infective asthma with pharmacopeia. The differential diagnosis of bronchial asthma, by Horace S. Baldwin. Hyperplastic sinusitis and asthma, by R. Clark Grove. Section III, Allergy of the upper respiratory tract: Allergic rhinitis—(seasonal hay-fever—pollinosis) by Albert Vander Veer. Allergic rhinitis—seasonal—continued (special features of ragweed hay fever) by Salem Hebald. Allergic rhinitis—perennial (vasomotor rhinitis—hyperplastic rhinitis) by W. C. Spain. Section IV, Allergy of the skin: Allergic dermatitis. Allergic dermatitis—intrinsic (infantile eczema—atopic dermatitis). Allergic dermatitis—extrinsic (external contact type dermatitis) by Louis Schwartz. Allergic dermatitis—dermatitis venenata. Allergic dermatitis—symptomatic treatment, by Dudley D. Stetson. Other allergic dermatoses. Section V, Allergy of the nervous system: Allergic neuropathies. Migraine, by Joseph Harkavy. Ménière's disease, by Joseph Harkavy. Section VI, Allergy of the cardiovascular system: Cardiovascular allergy, by Joseph Harkavy. Section VII, Allergy in relation to other specialties: Allergy of the digestive system. Allergy of the eye. Allergy of infancy and childhood, by Robert Chobot. Section VIII, Allergens in relation to diseases of allergy: Bacterial allergy. Inhalants (air-borne allergens) by Robert Chobot. Food allergy, by Robert Chobot. Allergy to drugs, endocrine products and serum, by Horace S. Baldwin. Physical allergy, by J. Harkavy. Section IX, Technics: Skin testing, by Matthew Walzer. Laboratory procedures, by Margaret B. Strauss and W. C. Spain. Appendix: Non-specific causes or influences in relation to allergic disease. Index.

Note: The major part of this book has been prepared by the Director of the Department of Allergy at Roosevelt Hospital, New York; and additional chapters have been contributed by thirteen other specialists in the field. It was developed out of postgraduate courses in allergy sponsored by the American College of Physicians, and is addressed primarily to medical college graduates. It presents a systematic review of the current knowledge regarding the diagnosis and treatment of allergy. The chapters outlining general practices and theories are followed by detailed discussions of the causes, diagnosis, and treatment of various forms of allergy. Most chapters include extensive bibliographies.

CRIEP LEO HERMANN

Essentials of allergy with a foreword by Robert A. Cooke. 42 illustrations in black and white and 1 plate in full color Philadelphia J B Lippincott Company *1945 ..79* p illus. (part col d) 20 cm. $5.00 1115

Contents: Hypersensitiveness. Anaphylaxis. Allergy. *Diagnosis of allergy.* Treatment of allergy. Pollen allergy (hay fever). *Bronchial* asthma. Nasal allergy. Skin allergy (allergic dermatoses). Serum allergy. Drug allergy. Bacterial allergy. Fungus allergy. *Physical*

allergy Miscellaneous allergy Allergy in children. Diagnostic skin tests. Reference books. Index.

Note A rather thorough outline that is designed for practical use by general practitioners. In typical chapter there are discussions of the etiology pathology diagnosis, prognosis, case reports, and bibliography The book is generously supplied with reference material such as special diets and recipes, data on pollen and pollen seasons, and references to other literature.

FEINBERG SAMUEL MAURICE

Allergy in practice With the collaboration of Oren C Durham and Carl A. Dragstedt. Second edition revised. Chicago The Year Book Publishers, Inc. 1946 838 p illus. 23 cm. $10.50 1116

Contents Introduction and history Hypersensitiveness in animals—anaphylaxis. Hypersensitiveness in man General causes of allergic disease. Epidermal allergens Pollens and pollen allergy by Oren C. Durham. Allergy to fungi. Miscellaneous inhalants. Food allergy Allergy to drugs. Allergy to injected substances. Internal allergens (intrinsic allergy) Allergy to physical agents. Asthma—symptoms and pathology Diagnosis—asthma and allergy Treatment of allergic diseases—symptomatic and specific. Treatment of allergic diseases—nonspecific. Hay fever—manifestations, causes, diagnosis. Hay fever treatment. Hyperesthetic rhinitis Urticaria and angioneurotic edema. Atopic dermatitis and dermatophytosis. Contact eczema. Allergy of the digestive tract. Migraine and allergic headaches. Allergy of the eye. Miscellaneous manifestations. Preparation of allergens. Histamine in anaphylaxis & allergy by Carl A. Dragstedt. Histamine antagonists. Index.

Note. (1411a) A comprehensive manual of the causes, diagnosis, and therapy of all types of allergies. Extensive literature references are included The book is designed for use both as textbook and as reference manual for practitioners. In this edition the additions include new material on pollen counts and on histamine.

TAUB SAMUEL JAMES

Essentials of clinical allergy Baltimore The Williams & Wilkins Company 1945 198 p. illus. 23 cm $3.00 1117

Contents Introduction. Immunochemistry and its relation to clinical allergy The anatomy of allergy Seasonal pollinosis or seasonal hay fever. Perennial hay fever Asthma. The etiologic diagnosis and treatment of asthma. Molds—their role in allergy Disturbances of the skin due to allergy Drug allergy Gastrointestinal allergy Allergy of the eye. Migraine and allergic headache. Allergic arthritis. Genito-urinary tract allergies. Cardiovascular allergy Physical allergy Bacterial allergy Serum sickness and prophylaxis Method of preparing extracts. Instructions to patients. Special diets and recipes. Index.

Note A brief practical manual written for the general practitioner or medical student who is unable to make detailed study of allergic diseases. For each type of allergy the author presents concise account of symptoms, tests, diagnosis, and methods of treatment. Summarized case histories, often to illustrate how treatment was carried out, are included References to other literature are included in most chapters, but no attempt is made to give complete bibliographical coverage of the subject.

URBACH ERICH AND PHILIP M GOTTLIEB

Allergy Second edition New York Grune & Stratton 1946 968 p. illus. 26 cm. $15 00 1118

Content (*abridged*) Part One, Fundamentals of allergy- Historical survey The phenomena of hyper- and hyposensitiveness. Mechanism of allergy Predisposing and contributory factors in allergy The experimental basis of allergy Pathology of tissues and blood in allergy Chemistry of allergy Antigens (allergens) Antibodies. Diagnosis of allergic diseases Principles of treatment. Part Two, Etiologic agents of allergic diseases Inhalants. Ingestants. Injectants. Contactants. Physical agents. Infectants Part Three, Symptomatology and therapy of allergic diseases. Allergic diseases of the respiratory tract Allergic diseases of the gastro-intestinal tract. Allergic diseases of the liver and gallbladder Allergic skin diseases. Allergic diseases of the nervous system Allergic diseases of the eye. Allergic diseases of the ear Allergic diseases of the cardiovascular system Allergic diseases of the joints. Allergic diseases of the urinary tract. Allergic manifestations due to functional and pathologic changes of the female genital organs Allergy in the newborn, in infancy and in childhood Allergy in the aged. Appendix: Index of authors. Index of subjects.

Note: (1419) A comprehensive presentation of the present-day knowledge of allergy Fundamental principles, methods of diagnosis and treatment, and the more common etiological agents are discussed in detail. Afterwards there are thorough studies of the various allergic diseases from the clinical and therapeutic viewpoint. The authors' own experiences have been drawn upon as the foundation for many of the interpretations and opinions expressed, but the literature of the subject has also been surveyed and is abstracted in the text with keyed references from the text itself to the footnotes in which full citations are given. Although the number of pages is fewer in the present edition, the reduction is due to the adoption of two-column format. The matter included has been increased by about 10%. There is new material on such subjects as the psychosomatic aspects of allergy the Rh factor allergic bronchitis, allergic cough and the former discussions of such topics as antibiotics, toxic and allergic dermatitis, the allergy of infectious diseases, and the diagnosis of complications of asthma have been enlarged. The number of references to allied literature has been greatly increased.

WODEHOUSE, ROGER PHILIP

Hayfever plants their appearance, distribution time of flowering and their role in hayfever with special reference to North America. Waltham Mass. Published by the Chronica Botanica Company 1945 245 p illus. 27 cm. (A new series of plant science books edited by Frans Verdoorn. Vol. xv) $4 75 1119

Contents The botany of hayfever The hayfever plants: gymnosperms. The hayfever plants angiosperms. Regional surveys. Glossary Bibliography Author index. General index.

Note The purpose of this volume is "to interpret the botanical facts of hayfever in terms of their clinical significance. The introductory chapter describes the role of plants in hayfever contains directions for conducting regional surveys and for collecting and identifying atmospheric pollen, and closes with brief guide to the botanical literature concerning the flowering plants of North America. The middle two chapters describe in sequence the pollen-bearing plants known to cause hayfever or suspected of so doing, as outlined in the title and sub-title, with technical drawings by the author The final chapter is compilation of the information provided by 135 reports of regional surveys of hayfever in all parts of the United States; for each of "the ten hayfever regions" are given accounts of the principal offending plants and the seasonal occurrence of hayfever with accompanying chart and review of the literature and "hayfever resorts" are discussed.

MALIGNANT GROWTH

ACKERMAN LAUREN VEDDER, AND JUAN A. DEL REGATO

Cancer diagnosis, treatment, and prognosis With 745 text illustrations and 42 color reproductions. St. Louis The C. V Mosby Company 1947 1115 p illus. (part col d) 25 cm. $20 00 1120

Contents Introduction. Cancer research, by M. B. Shimkin. Pathology of cancer. Surgery of cancer Radiotherapy of cancer. Cancer of the skin. Cancer of the respiratory system and upper digestive tract Tumors of the thyroid gland Tumors of the mediastinum. Cancer of the digestive tract. Cancer of the genito-urinary tract. Cancer of the male genital organs. Tumors of the suprarenal gland. Cancer of the female genital organs. Cancer of the mammary gland. Malignant tumors of bone Sarcomas of the soft tissues. Cancer of the eye. Hodgkin's disease. Leukemia. Authors index. Subject index.

Note An exceptionally comprehensive presentation of the modern clinical knowledge of cancer Among the four general chapters at the beginning of the book, the one on radiotherapy which is about 30 pages long, is outstanding By far the greater part of the book consists of the discussion of cancer according to systems and anatomic types. In this part, for each type of cancer, modern knowledge as to its anatomy incidence and etiology pathology clinical evolution, diagnosis, treatment, and prognosis is presented clearly and fully In the discussions of anatomy lymphatics are given special attention and the lymphatic system of each potential cancer site is usually represented diagrammatically Long bibliographies are included with the chapters. The work is suitable for use as text book and also as reference book, especially for general practitioners

BAILEY, PERCIVAL

Intracranial tumors. Second edition. Springfield, Ill. Charles C Thomas 1948 478 p illus. 25 cm. $11.50 1121

Contents: The problem of tumors in general. Structure of the cranium and of its content. Physiological considerations. Acoustic neurinoma. Hypophyseal adenomas. Craniopharyngiomas. Tumors of the intracranial connective tissues. Meningiomas. Tumors of the vascular system. Tumors of the neuroglial tissues. Medulloblastoma. Astrocytoma. Oligodendroglioma. Glioblastoma multiforme. Spongioblastoma. Pinealoma. Miscellaneous and metastatic tumors. General diagnosis. Differential diagnosis. Treatment of intracranial tumors. Bibliography. Index. Plates.

Note: This text for students of neurology is based on the author's demonstrations and clinics given at the University of Chicago. Throughout the volume emphasis is placed on pathology and diagnostic procedures rather than on operating techniques or treatment. The illustrated case histories which are frequently cited are taken from the author's clinical experience. Changes made in this edition consist primarily of the insertion of recent advances in the field and the addition of sixteen roentgen photographs. A bibliography of 111 references is included.

FOOT NATHAN CHANDLER

Identification of tumors, essential gross and microscopic pathologic features systematically arranged for easier identification 241 illustrations. Philadelphia J B Lippincott Company 1948 397 p. illus. 24 cm. $7.00 1122

Contents: Part I, Neoplasms of general distribution. Tumors of fibrous tissue. Tumors of cartilage and bone. Tumors of muscle. Tumors of fat. Tumors of serous membranes. Tumors of the cardiovascular system. Tumors of epithelial tissue. Tumors of the lymphoid tissue (the "lymphomas"). Tumors of the spleen. Part II, Neoplasms of special systems and organs. Tumors of the respiratory system and mediastinum. Tumors of the alimentary system. Tumors of the liver, gallbladder and pancreas. Tumors of the urinary system. Tumors of the organs of internal secretion. Tumors of the male reproductive system. Tumors of the female reproductive system. Tumors of the breast. Tumors of the nervous system. Tumors of the skin. Tumors of the ear and eye. Technical methods of value in the diagnosis of tumors. Tabular locator for tentative identification of neoplasms. Index.

Note: A concise, well-organized manual designed as an aid in diagnosis. Tumors distributed throughout the body are treated in Part I; those which are usually associated with a specific location in a system or organ are covered in Part II. For most malignant and non-malignant tumors the following information is given: source, site, age and sex of typical host if important, gross appearance, microscopic appearance, and differential diagnosis. The "tabular locator" at the end of the volume sums up briefly the characteristics of all the known types and is intended as a tool for preliminary identification. The illustrations include excellent reproductions of microphotographs. The author is Professor of Surgical Pathology in Cornell University Medical College.

FRIED BORIS MARK

Bronchiogenic carcinoma and adenoma with a chapter on mediastinal tumors. Baltimore The Williams & Wilkins Company 1948 306 p. illus. 23 cm. $6 00. 1123

Contents (abridged): Bronchiogenic carcinoma: Incidence. Pathologic anatomy—histogenesis—classification. Alveolar cell cancer and adenomatosis of the lungs. Etiology. Metastases. Clinical manifestations. Bronchiogenic cancer combined with tuberculosis of the lung. Superior pulmonary sulcus tumors. Hypertrophic pulmonary osteoarthropathy. Laboratory methods of diagnosis. Treatment. Bronchiogenic adenoma. Mediastinal tumors. Index.

Note: Although dealing with a subject of interest to cancer specialists, this monograph, with its exposition of the diagnostic difficulties and its presentation of many illustrative cases, will benefit internists and general practitioners as well—especially in view of the vital importance of early recognition of cancer. Following a discussion of the incidence of pulmonary cancer the author analyzes its bronchiogenic origin, clinical manifestations, etiology, etc., always considering the existing theories and cautiously stating his opinion. To facilitate differential diagnosis, special chapters are devoted to the combination of bronchiogenic carcinoma with tuberculosis, to other tumors in the thoracic cage, and to the laboratory methods of diagnosis. Each chapter is followed by a bibliography. There are 118 figures. Pertinent literature is generously cited.

GATES, OLIVE, AND SHIELDS WARREN

A handbook for the diagnosis of cancer of the uterus by the use of vaginal smears with a foreword by George N Papanicolaou. Second edition. Cambridge, Mass. Harvard University Press, 1948. 192 p. illus. 27 cm. Paper $5.00 1124

Contents: General considerations relating to the vaginal smear method. Technique. Morphology of genital tract. Normal histology of the vaginal smear. Pathology of cancer of the uterus. Characteristics of malignant cells in smears. Diagnosis of smears taken following radiation therapy. Sources of error in diagnosis. General aids in use of the vaginal smear method. Current appraisal of the vaginal smear method. References. Plates. Index.

Note: A laboratory guide written for the practicing pathologist and laboratory technician. The material is so presented as to be of particular value to those who must resort to self training in learning this technique for detecting cancer in its incipient forms. A discussion of the advantages and deficiencies of the method in relation to other methods of examination is followed by a concise description of laboratory procedures and methods of interpretation. Fifty plates bearing three to four excellent photomicrographs, together with accompanying explanatory notes, are included. In this edition the chapter on smears taken following radiation therapy has been rewritten, and twenty-one new illustrations have been added.

GREENSTEIN, JESSE PHILIP

Biochemistry of cancer New York Academic Press Inc. 1947 389 p. illus. 24 cm. $7.80 1125

Contents. The general phenomena and taxonomy of cancer. The induction of tumors: Extrinsic factors. Intrinsic factors. Attempts at control of tumor induction and of tumor growth. Nutrition. Endocrinology. Chemotherapy. The properties of tumors. Chemistry of tumors. Chemistry of the tumor-bearing host. The present status of the problem. Author index. Subject index.

Note: This monograph provides a comprehensive digest and analysis of the current knowledge of the biochemical aspects of cancer. Although it is based on a literature survey the author's own comments and interpretations are valuable. The interdependence of the various research approaches to the cancer problem is stressed, and many of the gaps in the biochemical knowledge are pointed out. The eighth and ninth chapters, "Chemistry of tumors," and "Chemistry of the tumor-bearing host," account for more than half of the book's length and summarize, partly in tables, the published data on these topics. The author is Head Biochemist of the National Cancer Institute.

MOULTON FOREST RAY editor

Approaches to tumor chemotherapy A symposium of papers and discussions on various aspects of tumor chemotherapy developed from the summer meetings of the Section on Chemistry (C) of the American Association for the Advancement of Science at Gibson Island Maryland, 1945–1946 Washington American Association for the Advancement of Science 1947 442 p illus. 26 cm. $7 75 1126

Contents (abridged): I, Historical introduction. General review of cancer therapy by W. H. Woglom. II, Special methodology: The transparent chamber technique as a tool in experimental tumor therapy by G. H. Algire. Some cellular and surface chemical aspects of tumor chemotherapy by M. J. Kopac. A method of producing ascolysis in rats that conferred a certain immunity against homologous tumors, by P. [illegible]. The chemistry of substances specific for the stimulation of lymphopoiesis and myelopoiesis, by D. L. Turner and F. R. Miller. A myeloid metaplasia factor from human urine, by R. W. Heinle, H. [illegible] and J. T. Weiss. III, Nutritional factors: The role of nutrition in the origin and growth of tumors, by A. Tannenbaum. The influence of diet on the production of hepatic tumors induced by p-dimethylaminoazobenzene, by E. L. Opie. Chemotherapeutic regressions of transplanted and spon-

taneous cancers in mice, by R. Lewisohn and others. Effect of intravenous injection of yeast and barley extracts and L. Casei factor upon spontaneous mammary adenocarcinoma in mice, by K. Sugiura. IV Bacterial products: A review of the treatment of malignant tumors by Coley bacterial toxins, by H. C. Nauts and B. L. Coley. Some aspects of a joint institutional research program on chemotherapy of cancer: current laboratory and clinical experiments with bacterial polysaccharide and with synthetic organic compounds, by M. J. Shear and others. V Nitrogen mustards: The relation between chemical constitution and biological action of the nitrogen mustards, by F. S. Philips and A. Gilman. Experimental observations on the use of the nitrogen mustards in the treatment of neoplastic diseases, by D. A. Karnofsky and others. An evaluation of methyl-bis(β-chloroethyl) amine hydrochloride and tris(β-chloroethyl) amine hydrochloride (nitrogen mustards) in the treatment of lymphomas, leukemia and allied diseases, by D. A. Karnofsky and others. Use of methyl-bis(β-chloroethyl) amine hydrochloride and tris(β-chloroethyl) amine hydrochloride ("nitrogen-mustards") in the therapy of Hodgkin's disease, lymphosarcoma, leukemia and certain allied and miscellaneous disorders, by L. S. Goodman and others. Clinical experiences with nitrogen mustard therapy, by M. M. Wintrobe and others. VI, Various clinical aspects: Anti-androgenic treatment of prostatic carcinoma in man, by C. Huggins. The treatment of blood dyscrasias, lymphomas, and other malignant diseases with radioactive phosphorus: clinical and experimental results, by K. H. Reinhard and N. A. Womack. Effects of urethane upon acute lymphatic leukemia in a dog, by H. B. Parry and J. R. M. Innes. Administration of oil-soluble organo-metallic compounds in malignancy, by C. F. Geschickter and E. E. Reid.

Note Many of the papers in this volume are monographic in style in the sense that they summarize the extant knowledge of a specific topic and give references to the pertinent literature. Also most of them contain reports of recent research. The volume is of interest primarily to active workers in cancer research.

MOULTON FOREST RAY editor

A symposium on mammary tumors in mice by members of the staff of the National Cancer Institute, National Institute of Health. United States Public Health Service. Washington D C. American Association for the Advancement of Science 1945 223 p illus. 27 cm. (American Association for the Advancement of Science. Publication no 22) $4 00 1127

Contents General and historical introduction, by M. B. Shimkin. Cytology of mammary tumors of the mouse, by A. J. Dalton. Morphology and histogenesis of mammary tumors, by T. B. Dunn. Histogenesis of the mammary gland of the mouse, by A. J. Dalton. The vascular supply of mammary gland carcinomas, by G. H. Algire and H. W. Chalkley. Genetics of mammary tumors in mice, by W. E. Heston. Hormones and mammary cancer in mice, by M. B. Shimkin. The milk influence in the genesis of mammary tumors, by H. B. Andervont. Diet and some other environmental influences in the genesis and growth of mammary tumors in mice, by H. P. Morris. The chemistry of the mammary tumors, by J. P. Greenstein. Experimental treatment of mammary tumors in mice, by H. M. Dyer. Conclusions—including discussion of the possible implications for man, by M. B. Shimkin.

Note The purpose of this cooperative work is two-fold—first to present a review of existing knowledge regarding cancer of the breast in mice, and secondly to stimulate further research into the problem. Thus each section consists essentially of a survey of outstanding research carried out in one particular phase of the subject and an evaluation of the results obtained, as based on a review of the literature of the field. In most cases extensive bibliographies are included. There is no index.

PEDIATRICS

ADVANCES IN PEDIATRICS Volume II. Editorial Board S Z Levine, Allan M. Butler L. Emmett Holt, Jr., A. Ashley Weech. New York Interscience Publishers Inc. 1947 409 p illus. 24 cm. $6 00 1128

Contents Etiology of congenital malformations, by J. Warkany. Acute infectious lymphocytosis, by C. H. Smith. Role of fluorine in prevention and treatment of dental caries, by H. T. Dean. The treatment of pertussis meningitides, by H. E. Alexander. Chemotherapy: penicillin, sulfonamides, streptomycin and tyrothricin, by P. György and H. F. Lee. Atypical pneumonia, by J. H. Dingle. Endocrine and other factors determining the growth of children, by N. B. Talbot and E. H. Sobel. Virus diarrhea, by K. Dodd. Prematurity, by H. H. Gordon. The genesis of physiologic hyperbilirubinemia, by A. A. Weech. Prevention of recurrences of rheumatic fever, by A. G. Kuttner. Author index. Subject index. Cumulative index, Volumes I and II.

—— Volume III Editorial Board S Z Levine, Allan M Butler L. Emmett Holt, Jr A. Ashley Weech. New York Interscience Publishers Inc. 1948 363 p illus. 24 cm. $7 50 1129

Contents Effects of birth processes and obstetric procedures upon the newborn infant, by C. A. Smith. Retrolental fibroplasia, by T. L. Terry. Emotions and symptoms in pediatric practice, by M. J. E. Senn. Therapeutic agents in the treatment of epileptiform seizures, by W. G. Lennox. Viral hepatitis, by J. Stokes, Jr. Abnormalities and variations of sexual development during childhood and adolescence, by L. Wilkins. Puberty and adolescence: psychologic considerations, by H. Bruch. The osteochondroses, by B. Howorth. Author index. Subject index. Cumulative indexes, Volumes I–III.

Note (1111) As in the first volume of the series, each of the papers in these volumes is a monographic survey of recent investigations and discoveries in the pediatric topic mentioned in its title. Each paper is accompanied by an extensive list of references, to which statements in the paper are keyed. The series is designed for pediatricians and general practitioners of medicine.

DAVISON, WILBURT CORNELL

The compleat pediatrician: practical, diagnostic, therapeutic, and preventive pediatrics for the use of medical students, internes, general practitioners, and pediatricians. Fifth edition. Durham, N C Duke University Press, 1946 Unpaged. Illus. 23 cm. $4.00 1130

Contents Respiratory group (including nose, throat and ear conditions). Gastro-intestinal group (including mouth, nutritional, deficiency and abdominal, except kidney and spleen, conditions). Skin conditions and contagious diseases (exanthemata). Neuropsychiatric group (including deafness and eye diseases). Circulatory, metabolic and glandular group (including heart, cardio-vascular, blood, spleen, reticulo-endothelial, endocrine and lymph-node conditions). Genito-urinary (urologic) group. Bone, muscle, cartilage, spine and joint (orthopaedic) group. Laboratory and other procedures frequently used in pediatrics. Nutritional requirements, feeding, and diets. General, fluid, oxygen and physical therapy, and pediatric nursing. Growth, development and general care of children; prematurity and the reduction of mortality. History taking and physical examination. Drugs and prescriptions frequently used in pediatrics. Index.

Note. (1510) A compact but exceptionally comprehensive handbook of pediatric knowledge, arranged for use as a reference aid in general and pediatric practice. The importance of symptoms and signs in diagnosis is stressed. Diseases are described from the diagnostic viewpoint, differential diagnoses are indicated, diagnostic laboratory tests are mentioned, and treatment, prognosis, and prevention are all covered. In preparing this edition, about 4,500 lines of the previous edition were rewritten to incorporate and correlate new information and techniques. The sixth edition was scheduled for publication in 1949

GESELL ARNOLD AND CATHERINE S AMATRUDA

Developmental diagnosis normal and abnormal child development clinical methods and pediatric applications. Second edition revised and enlarged. New York Paul B Hoeber Inc. Medical Book Department of Harper & Brothers 1948 496 p. illus. 24 cm. $7.50 1131

Contents Part One, Principles and methods: The development of behavior. The developmental examination of behavior. Norms of development. The conduct of the examination. Part Two, Defects and deviations of development. Problems of differential diagnosis. Amentia and retardation. Amentia of high grade. Low grade

anomalies. Endocrine disorders. Convulsive disorders. The neurological diagnosis of infant behavior. Cerebral injury. Blindness. Deafness. Prematurity. Precocity. Environmental retardation. Clinical aspects of child adoption. Part Three, The protection of early child development. Diagnosis and guidance. Developmental pediatrics. Appendices: Examination techniques. Growth trend chart. Examination equipment. Chronetic case studies. Readings on developmental guidance. Professional training for developmental pediatrics. Index.

Note: (1511) A manual whose purpose is to provide family physicians and pediatricians with practical guidance in diagnosing normal and abnormal behavior patterns in infants and children up to five years of age. It is based on thirty-five years of investigation and experience on the part of Dr. Gesell and his associates. A considerable amount of material, much of it based on experience at the Yale Clinic of Child Development, has been added in this revised edition, particularly in the discussions of blindness, deafness, low grade amentia, prematurity, convulsive disorders, and adoption. The final chapter on developmental pediatrics and the last two appendices also are new in this edition.

GRULEE, CLIFFORD GROSELLE, AND R. CANNON ELEY

The child in health and disease: a textbook for students and practitioners of medicine. Baltimore: The Williams & Wilkins Company, 1948. 1066 p. illus. (part col'd) 26 cm. $12.00 1132

Contents (abridged): Section I, General considerations. Section II, Nutrition. Section III, The newborn and prematurity. Section IV, Communicable diseases. Section V, Acute infections. Section VI, Chronic infections. Section VII, The circulatory system including the blood, spleen, and lymph nodes. Section VIII, Blood and lymph. Section IX, The respiratory system. Section X, The gastro-intestinal tract. Section XI, The genito-urinary tract. Section XII, Diseases of the nervous system including mental deficiency and psychiatric disturbances. Section XIII, The muscles, bones, and joints. Section XIV, Allergy, eczema, and diseases of the skin. Section XV, The endocrines, abnormal endocrine states, obesity, dwarfism. Section XVI, The eye. Section XVII, Adolescence. Section XVIII, Surgical conditions and surgical principles in pediatrics. Section XIX, Miscellaneous subjects: Accidental poisoning of infants and children. Lead poisoning. First aid in pediatrics. Pediatric techniques. Children's teeth. Index.

Note: More than fifty specialists have contributed to make this textbook of pediatrics as comprehensive as possible within its exclusively practical scope. The text consists essentially of a description of the numerous diseases encountered in pediatric practice, their diagnosis and treatment. Only a few of the chapters deal with normal development in childhood and adolescence.

LEIGH, M. DIGBY, AND M. KATHLEEN BELTON

Pediatric anesthesia. New York: The Macmillan Company, 1948. 240 p. illus. 22 cm. $5.50 1133

Contents: Preoperative preparation. Respiration and circulation. Stages and planes of anesthesia. Inhalation anesthesia. Intubation. Intravenous anesthesia. Rectal anesthesia. Anesthesia with local agents. Choice of anesthetic agent and technic. Complications during anesthesia. Postoperative care. Prophylaxis and therapy with oxygen. Fluid therapy. General references. Index.

Note: A practical guide to the fundamental principles and methods of anesthesia as they are adapted to meet the requirements of infants and young children. Specialized techniques employed in the administration of various types of anesthetics and the conditions governing the choice of an agent are discussed in detail. Throughout the book particular attention is given to the complications, emergencies, and special problems which may arise because of the age of the patient. A short bibliography is included in each chapter.

MACKEE, GEORGE MILLER, AND ANTHONY C. CIPOLLARO

Skin diseases in children. Second edition revised and enlarged. With contributed chapters. New York: Paul B. Hoeber Inc., Medical Book Department of Harper & Brothers, 1946. 448 p. illus. (part col'd) 24 cm. $7.50 1134

Contents: The care of normal skin. Diseases in which pyogenic bacteria are important etiologic factors. Diseases due to fungi. Diseases due to animal parasites. Allergic dermatoses in children, by F. Fischer. The eczema group. The erythema group of skin diseases. Vascular diseases. Dermatitis medicamentosa (drug eruption). Scaling dermatoses and the lichens. Benign and malignant new growths. Congenital cutaneous anomalies, by E. F. Traub. Dystrophies. Pigmentary affections. Diseases of the sweat glands, sebaceous glands, hair and nails. Diseases of the mouth. Injuries due to physical agents. Vesicular and bullous diseases. Contagious diseases, by N. Sobel. Tuberculosis group of skin diseases. Syphilis in children, by H. Beerman. Index.

Note: A simple, practical guide, whose chief purpose is to aid general practitioners and pediatricians in the diagnosis and treatment of skin diseases that are found in children. Thus it covers the dermatoses peculiar to childhood, chronic conditions which begin in childhood, and a selection of skin diseases which may occur at any age. Practically the entire book is concerned with diagnosis and treatment. Treatments which are possible with the facilities which are available to the average family physician are emphasized. A number of prescriptions for medicines are included. There are fairly extensive bibliographies and 125 illustrations.

NELSON, WALDO EMERSON, editor

Mitchell-Nelson textbook of pediatrics. With the collaboration of forty nine contributors. 519 illustrations on 333 figures, 26 in color. Fourth edition, revised. Philadelphia: W. B. Saunders Company, 1945. 1350 p. illus. (part col'd) 26 cm. $11.50 1135

Contents (abridged): The field of pediatrics. Care and evaluation of all children. General factors in the care of sick children. The newborn infant. The premature infant. Nutritional disturbances. Miscellaneous diseases. Congenital malformations. Malignant tumors in early life. Infectious diseases. Poisoning from drugs, metals and food. The digestive system. The respiratory system. The cardiovascular system. The blood. The spleen. The lymph nodes. The thymus gland. Disturbances of cellular fluid metabolism and related conditions. The genito-urinary system. Psychopathologic disorders. The nervous system. Convulsive disorders. The cerebral palsies. The endocrine system. Diabetes mellitus. Hypoglycemia. The bones and joints. The muscles. Allergic diseases. The skin. The eye. Special problems of the adolescent child. Appendix. Index.

Note: This text for medical students and reference tool for general practitioners and pediatricians provides a comprehensive discussion of the causes, pathology, symptoms, diagnosis, and treatment of the diseases of infancy and childhood. The present edition has been fully revised and rewritten by a former pupil of Dr. Mitchell, in collaboration with other specialists in the field. Although the general scope and purpose of the previous edition have been retained, changes in arrangement, the addition of new sections, and the deletion of others have resulted in virtually a new work.

SCHAUFFLER, GOODRICH CAPEN

Pediatric gynecology. Second edition. Chicago: The Year Book Publishers Inc., 1947. 380 p. illus. 23 cm. $6.00 1136

Contents: General considerations—psychologic factors in management. Special methods of investigation. The external genitalia. The vagina. Management of vaginitis. The uterus. Disorders during adolescence—the onset of menstruation. Surgical aspects of the pelvic viscera. General surgical considerations. Special urologic considerations. Special proctologic considerations. Social service aspects. Medicolegal aspects. Appendix II: Basic standards of hormone units—commercial hormone preparations. Appendix III: State agencies administering child welfare services. Index.

Note: (1128) A rather thorough manual of a branch of pediatrics in which there is not much literature in book form. In this edition the material on surgery has been revised and considerably expanded. The valuable chapters on social and legal aspects also have been expanded; and there are other important changes such as revisions of the lists of commercial hormone preparations and of state social service agencies.

STONE, EMERSON LAW

The new-born infant: a manual of obstetrical pediatrics. Third edition thoroughly revised. Philadelphia: Lea & Febiger, 1945. 314 p. 21 cm. $3.25 1137

Contents The immediate care of the new-born. The physiology and development of the new-born. The nursing care of the normal infant. The technique of nursing. The pathological aspects of lactation. Modified feeding. The dietary disorders of infancy. Birth injuries—cranial. Birth injuries—extracranial. Infections. Disorders of special systems. The premature infant. Index.

Note This little volume is the outgrowth of a short course of lectures given to senior students at the Johns Hopkins Medical School. It is written primarily for the obstetrician and discusses the care and treatment of the infant during the first month or six weeks of life, a period which does not normally fall within the jurisdiction of either the obstetrician or pediatrician. The present revision takes into account the latest obstetric and pediatric principles and practices relating to the newborn infant, as evidenced by many small alterations, condensations, deductions, and additions to the text.

YEAR BOOK OF PEDIATRICS

The 1948 Year book of pediatrics edited by Henry G Poncher and Isaac A. Abt, editor emeritus. Chicago The Year Book Publishers Inc. 1948 542 p. illus. 19 cm. (The practical medicine year books) $4.50 1138

Contents The newborn. Nutrition and metabolism. The gastro-intestinal tract. Poliomyelitis. Infectious diseases and immunity. The heart and blood vessels. The blood. The respiratory tract. Tuberculosis. Allergy. Endocrinology. Dermatology. Genitourinary tract. Orthopedics. Neurology and psychiatry. Eye, ear nose and throat. *Therapeutics and toxicology. Miscellaneous. Index. Index to authors.*

Note (1534) This annual volume is edited and organized on the same plan as is used in the other books in this useful series. A selection of the more important articles from the medical periodicals of the world is digested in the form of fairly long abstracts. In many cases abstracts are supplemented by notes written by the editor. References to the original publication are given in footnotes. The present issue is illustrated with more than 165 figures.

ZAHORSKY JOHN

Synopsis of pediatrics. Fifth edition. Assisted by T S Zahorsky With 158 text illustrations and 9 color plates. St. Louis The C. V Mosby Company 1948 449 p. illus. (part col d) 20 cm. $5.50 1139

Contents (abridged) The hygiene of infancy—care of the newborn—hospitalism. Natural feeding. Artificial feeding of infants. Malformations of the newborn. Nutritional disorders. Deficiency diseases. Disorders of growth. Disorders of metabolism. Infectious diseases. The common cold. Diphtheria—septic sore throat. Erysipelas and scarlet fever. Measles. Infantile paralysis. Tuberculosis. Syphilis. Rheumatism—arthritis. Allergy. Diseases of the endocrine glands. *Diseases of the blood. Diseases* of the alimentary tract. Diseases of the respiratory organs. Diseases of the circulatory system. Diseases of the genitourinary organs. Diseases of the brain and meninges. Diseases of the nervous system. Diseases of the bones and joints. Diseases of the skin. Diseases of the eyes and ears. Poisons and bites. Drugs and doses. Index.

Note (1535) A condensation in handbook form of the important facts of pediatrics selected from standard textbooks on the subject. The book is intended for reference use by students and practitioners and outlines the symptoms and treatment for each disease. This edition has been revised and slightly enlarged by the incorporation of recent pediatric practices and the use of newer drugs.

GERIATRICS

BOAS ERNST PHILIP

Treatment of the patient past fifty Third edition. Chicago The Year Book Publishers, Inc. 1947 479 p. illus. (part col'd) 21 cm. $5 75 1140

Contents Aging and disease. The aging process. General management of the aging and aged person. Principles of diagnosis and treatment. *Diseases* of the cardiovascular system. Diseases of the cardiovascular system—hypertension. Diseases of the cardiovascular system—syphilis. Diseases of the cardiovascular system—valvular diseases and irregularities. Diseases of the cardiovascular system—general management. *Diseases* of the lungs. Diseases of the gastro-intestinal tract. Diseases of the bile passages, liver and pancreas. Diseases of the genito-urinary tract. Diseases of the bones and joints, and gout. Infectious diseases. Diabetes. Diseases of the thyroid gland. Disorders of the blood. Diseases of the eyes. Diseases of the skin. Diseases of the nervous system. Index.

Note. (1536) The special approach required in treating aging and aged patients is explained in this standard guide to geriatrics for general physicians, surgeons, industrial physicians, and internists. The third edition has been expanded to include material on some half-dozen additional diseases. Several new illustrations have been added, and the section on nervous and mental troubles has been rewritten.

JOHNSON, WINGATE MEMORY

The years after fifty with a foreword by Morris Fishbein New York Whittlesey House, McGraw Hill Book Company, Inc., 1947 153 p 21 cm. (Whittlesey House health series Morris Fishbein editor) $2.50 1141

Contents: General considerations. Taking inventory. The happiness of age. Blood pressure—high and low. Disorders of the respiratory system. Diseases of the heart and blood vessels. Disorders of the digestive system. Dietary fads and fancies. Rheumatism and arthritis. The glands of internal secretion. Mental changes of age. Exercise and recreation. Preparing for old age. "The lean and slipper'd pantaloon." Bibliography. Index.

Note The chief value of this small book for lay readers lies in its clear and non-technical discussions of the various bodily changes which the person over fifty years of age may experience, and which he should be prepared to expect. *It describes the significance of* these changes and disorders, and shows how the individual can cooperate with his physician to alleviate and even remove the condition. Interwoven with the practical aspects of the subject are sound philosophical observations which the author evolved during his professional career as a family physician.

MOORE ROBERT A., editor

Ageing and degenerative diseases. Editorial committee W M Allen, E. V Cowdry W B Kountz W B Wood Jr New York The Ronald Press Company 1945 242 p. illus. 25 cm. (Biological symposia. Vol. xi, Jaques Cattell, editor) $3 00 1142

Contents Preface, by R. A. Moore. The relation between etiology and morphology in degenerative sclerosing vascular diseases, by W C. Hueper. Arteriosclerosis and lipid metabolism, by L. H. Page. Research work on degenerative diseases, by W B. Kountz. Blood cholesterol levels in elderly patients, by W B. Kountz, A. Sonnenberg, L. Hofstatter and G. Wolff. The glucose tolerance in the elderly patient, by L. Hofstatter, A. Sonnenberg and W B. Kountz. *Progeria, by A. S. Schwartz and J V Cooke. Effects of lesions of* the autonomic ganglia, associated with age and disease, on the vascular system, by A. Kuntz. The role of the pancreas in arteriosclerosis, by L. R. Dragstedt. Difficulties in the clinical recognition of degenerative diseases, by E. J Stieglitz. Correlation of clinical knowledge in the treatment of the degenerative diseases, by W J. Kerr. Age, change, and the adapted life, by W deB. MacNider. Nutrition and growth and their influence on longevity in rats, by J A. Saxton, Jr. Cancer and the process of ageing, by L. Loeb. Round table discussion.

Note A series of medical research papers intended for practitioners and clinical workers in medicine. The papers were presented originally at a symposium held in St. Louis, March 24–25 1944, under the joint sponsorship of the Research Unit of the St. Louis City Infirmary and the Washington University School of Medicine.

STIEGLITZ EDWARD JULIUS

The second forty years Philadelphia and New York J B Lippincott Company 1946. 327 p illus. 22 cm. $3 95 1143

Contents How old is old? The biology of senescence. What senescence means to us. The hazards of senescence. Life with handicapped heart. High blood pressure. Nutrition in later years. Sex and age. The question of *cancer*. The point of view. Wise investment of leisure. An aging people. Constructive medicine. Postscript.

Note The increasing numbers of older people in the United States has turned attention to the special health and psychical problems of the aged and has resulted in an increasing production of books and technical articles dealing with these subjects. Most of this published material has been written for the physician and

biologist directly concerned with problems of gerontology The author of this book, however feels that what is now known about aging successfully belongs in the hands of the aging adult himself Accordingly, he has written simple direct book for laymen who are interested in establishing and maintaining optimum conditions of mental and physical health during the years after forty

THEWLIS, MALFORD WILCOX

The care of the aged (geriatrics) Fifth edition, thoroughly revised with 65 illustrations. St. Louis The C. V Mosby Company 1946 500 p Illus. 25 cm. $8 00 1144

Contents (abridged) Part I, General considerations: History of geriatrics. Part II, Gerontology: Life extension. Hygiene (geriatrics) Hobbies. Part III, Medicolegal relations. Part IV Miscellaneous geriatric problems: Anatomic changes. Physiologic and pathologic changes. Therapeutics. Geriatric nursing. Part Diseases of metabolism and endocrine disorders. Part VI, Infectious diseases and focal infection. Part VII, Systemic pathologic conditions: Special senses. Respiratory system. Cardiovascular system. Alimentary tract. Neurology Muscles, bones, and joints. Genitourinary disease Diseases of the skin. Part VIII, Special topics. Alcoholism. Allergy Cancer Anesthesia. Surgery Index.

Note: The author of this text, using the experience of his own practice as background, has produced practical and concise guide to the clinical problems of the aged. Particular attention is given to the special problems arising from the diagnosis and treatment of disease in the aged person. This edition has undergone considerable revision and reorganization and new material has been added on stress and longevity congestive heart failure, venous pressure, the kidneys during infections, mental hygiene, psychotherapy and preventive geriatrics. References are included at the end of each chapter.

GYNECOLOGY AND OBSTETRICS

ASHLEY MONTAGU MONTAGUE FRANCIS
Adolescent sterility a study in the comparative physiology of the infecundity of the adolescent organism in mammals and man. Springfield, Ill. Charles C Thomas, 1946 148 p illus 23 cm. $3.50 1145

Contents Introduction. Adolescent sterility in lower mammals. The rhesus monkey The chimpanzee. Adolescent sterility in man. The biology of adolescent sterility Conclusions. Appendix. Bibliography Index.

Note In this work the author assembles, examines, and appraises the contributions of many investigators and observers to the present knowledge of adolescent infertility in female mammals. An allied subject on which data are also included is the effect of conceptions upon the health and mortality of mothers and offspring. Precise references are given to wide range of literature in anthropology sociology biology and medicine. The book is intended for scientifically minded laymen as well as for physicians and scientists.

BECK, ALFRED CHARLES
Obstetrical practice. Fourth edition. Baltimore The Williams & Wilkins Company 1947 966 p illus. (part col d) 26 cm. $7.00 1146

Contents (*abridged*) The menstrual cycle. Chronological development of pregnancy Physiology of the fetus. Diagnosis of pregnancy Management of pregnancy The essential factors in labor Clinical course of labor Management of labor The puerperium Lactation. Face presentation. Breech presentation Compound presentation and prolapse of the umbilical cord Multiple pregnancy Abortion Ectopic gestation Toxemias of pregnancy Medical and surgical complications of pregnancy The pathology of labor Faulty passages. Placenta previa and accidental hemorrhage Rupture of the uterus. Inversion of the uterus. Retained and adherent placenta. Postpartum hemorrhage. Puerperal infection. Artificial interruption of pregnancy Methods used to hasten or complete the dilatation of the cervix Forceps Cesarean section. Destructive operations Repair of lacerations. Resuscitation of the newborn child. Analgesia, amnesia and anesthesia. Index.

Note (1543) A standard text and reference book which is notable for the unusual clarity of both the text and drawings. The discussions in the text are unusually detailed and practical The book is illustrated largely with reproductions of original drawings, many of which are done in sequences to show successive steps of procedure. In preparing the work for this edition some old material was deleted, and considerable amount of new material added. The discussions of implantation and placentation were thoroughly rewritten and new illustrations drawn The use of penicillin has been added in both the discussion of puerperal infections and in the section on prevention of congenital syphilis. An entirely new chapter on analgesia, amnesia and anesthesia has been added There are now 1,047 figures, which include unusually complete sequences on labor delivery and Cesarean sections. Reference lists of fair length are appended to the chapters.

CASTALLO MARIO ALBERTO AND CECILIA L SCHULZ
Woman s inside story New York The Macmillan Company 1948 203 p. illus. 21 cm. $3.00 1147

Contents The miracle of you Nursery interlude You grow up to be woman. Your sex life Approach to marriage. Tumors—and tumors. Some day you're going to be forty! You can't have baby? Affections, afflictions, and infections! Happy expectations! Obstetrical postscript. Glossary Index.

Note. An informative and rather lightly written exposition of reproduction and related subjects from the viewpoint of the average woman. Chiefly it outlines in popular terms woman special psychology and physiology from conception and gestation through stages of infant, girl, young woman wife, mother and the menopause. While stressing the nature and function of the feminine reproductive system, there is also general medical information and advice for women on physical ailments, health and diet. The senior author is Chief Obstetrician and Chief Gynecologist at St. Mary's Hospital, Philadelphia, and an Associate Professor at Jefferson Medical College.

CROSSEN HARRY STURGEON AND ROBERT JAMES CROSSEN
Operative gynecology Sixth edition entirely revised and reset. Thirteen hundred thirty four illustrations including thirty in color St. Louis The C. V Mosby Company 1948 999 p illus (part col d) 26 cm. $15.00. 1148

Contents (*abridged*) Myoma of the uterus Cancer of the uterus. Inflammatory and hyperplastic conditions of uterus. Pelvic inflammation. Ovarian and parovarian tumors Other diseases of the ovaries, tubes, pelvic peritoneum, and pelvic connective tissue. Conservative surgery of ovaries and tubes Retrodisplacement of the uterus Prolapse of uterus and bladder Genital fistulas. Disturbances of function. The urinary tract in relation to gynecologic surgery. The intestinal tract in relation to gynecologic surgery by H. S. Brookes, J Nervous and mental symptoms in relation to gynecologic surgery Technique of abdominal operation Vaginal operations. Anesthesia in gynecologic surgery by H. S. Brookes, Jr. Medicolegal points. Index

Note (1548) A long-established, standard textbook. The actual number of pages has been reduced in this edition, but the treatment of current operative techniques is even more comprehensive. Material in the fifth edition that is of historical interest only has been dropped, certain matter has been set in smaller type, and substantial amount of new matter has been added, including material on such topics as pelvic hernia, lymphogranuloma, subinvolution of the uterus, and carcinoma.

CURTIS ARTHUR HALE
A textbook of gynecology Fifth edition with 455 illustrations chiefly by Tom Jones including 36 in color Philadelphia W B Saunders Company 1946 755 p illus. (part col d) 25 cm. $9 00 1149

Contents (*abridged*) Section I, Anatomy: Anatomy of the female pelvis and perineum. Embryology of the generative organs. Section II, Physiology (exclusive of endocrine glands) Section III, The endocrines The endocrine glands. Menstruation (the menstrual cycle) Clinical endocrinology Section IV History and examination. Section Infectious processes. Section VI, Tumors of the uterus. Section VII, Tumors of the ovary Tumors of the fallopian tubes, ligaments, and pelvic cellular tissues. Section VIII, Displacements and relaxations. Section IX, Disturbances of function Dysmenorrhea. Uterine hemorrhage Sterility Endometriosis. Leukorrhea. Genital fistulas Backache. Section XI, Lesions of the cervix Carcinoma of the vulva. Inversion of the uterus. Congenital malformations Section XII, The early months of pregnancy (from gynecological aspect) The appendix and the large intestine in relation to gynecology Urinary tract problems in gynecology Operative management and postoperative care. Index.

Note (1149) A text for the medical student and guide for the general practitioner and gynecologist. The volume provides essential information regarding gynecologic anatomy and physiology and the etiology pathology and treatment of women's diseases. Emphasis is placed on non-operative treatment wherever experience has proved it possible, but various operations are described in detail, with illustrations. Brief lists of references are included at the ends of the chapters. In this edition the general arrangement and scope of the previous volume have been retained. However extensive revisions have been made, particularly in those sections dealing with ovarian tumors and endocrinopathic disturbances. Gonorrhea has been reconsidered in the light of penicillin therapy, and new material has been added on aneurysmoid growth of the endometrial stroma, and hypertrophy of the uterus.

DE LEE, JOSEPH BOLIVAR AND J P GREENHILL

Principles and practice of obstetrics Ninth edition with 1108 illustrations on 860 figures, 211 in color Philadelphia W B Saunders Company 1947 1011 p illus (part col d) 26 cm. $12 00 1150

Contents (abridged) Part I, The physiology of reproduction, pregnancy labor and the puerperium Physiology of reproduction and development of the ovum. Physiology of pregnancy Conduct of pregnancy Physiology of labor The conduct of labor The physiology of the puerperium. The conduct of the puerperium. Endocrinology Part II, The pathology of pregnancy labor and puerperium Operative obstetrics. Index.

Note. (1530) Designed as text or reference book for medical student, obstetrician, and general practitioner this volume covers the care of obstetrical patients from conception through the puerperium. Diagnostic measures and tests are described and emphasis is placed on the relief of discomfort, prevention of accident, and immediate treatment of complications. Surgical procedures associated with delivery are fully covered. This edition includes new chapters on minor disturbances of pregnancy premature labor, prolonged pregnancy missed labor fetal erythroblastosis, care of premature babies, and circumcision. New material has also been added to the chapter on analgesia and anesthesia, and to the sections dealing with blood diseases, hyperemesis gravidarum, toxemias of pregnancy postpartum hemorrhage, placenta praevia, abruptio placentae, and acute and chronic diseases complicating pregnancy Periodical articles published since the 1943 edition have been added to the chapter bibliographies.

EVERETT HOUSTON SPENCER

Gynecological and obstetrical urology Second edition. Baltimore The Williams & Wilkins Company 1947 539 p illus. 23 cm. $6 00 1151

Contents (abridged) The relation of female urology to allied specialties. General study of the urological patient Cystoscopic technique Diseases of the urethra. Inflammation of the bladder Neoplastic disease and the bladder Other bladder conditions Incontinence of urine. Retention of urine. Diversion of the urinary stream. Congenital anomalies of the kidneys and ureters. Intrinsic ureteral obstructions. Extraneous ureteral obstructions arising in the genital organs Extragenital extraneous obstructions. Hydronephrosis The etiology and pathology of nontuberculous infections of the upper urinary tracts. Clinical forms of renal infection. Tuberculosis of the urinary tract. Calculous disease of the kidneys and ureters. Tumors of the kidney and ureter Traumatic injury of the kidneys and ureters. Index.

Note Based largely on the activities and experience of the Gynecological Department of the Johns Hopkins Hospital and University where the author is in charge of the Cystoscopic Clinic and is Associate Professor of Gynecology this treatise covers thoroughly the special urological diseases and conditions of women. It is designed for medical college students, general medical practitioners, and for gynecologists and obstetricians Cystoscopic techniques, especially Kelly's, are described in detail, but other surgical techniques are not, generally speaking, described so thoroughly In the second edition discussion of indirect cystoscopy and material on penicillin therapy have been added Also the bibliographies have been brought down to date. There are now 113 figures.

GREENHILL JACOB PEARL

Obstetrics in general practice Fourth edition, revised and enlarged. Chicago The Year Book Publishers Inc. 1948 468 p. illus. 21 cm. $5.50 1152

Contents (abridged) Antepartum care. Pregnancy complicating medical ailments. Abortion. Ectopic pregnancy Hydatidiform mole and chorioepithelioma. Pyelonephritis and ureteritis. Hyperemesis gravidarum. The toxemias of pregnancy Mechanism of labor. Forceps delivery and episiotomy Breech extraction. Placenta praevia. Abruptio placentae. Rupture of the uterus. Pathology of the third stage of labor Use of pituitary extract and ergot. Analgesia and anesthesia. Cesarean section Indications and contraindications. Multiple pregnancy Tumors of the genitals complicating pregnancy labor and puerperium. Postpartum care. Care of premature babies Fetal erythroblastosis and the Rh factor Puerperal infection. Roentgenography in obstetrics. Induction of labor Obstetric endocrinology Hormone tests for pregnancy and complications of pregnancy Index.

Note A concise and practical guide to the basic principles and methods of obstetrical practice as written for the general practitioner. The book is based on the author's wide experience and is intended to serve as companion volume to his *Office gynecology* described below Numerous minor changes were made in preparing this edition. The new material relates to such topics as the treatment of placenta praevia, the use of penicillin and streptomycin, and fetal erythroblastosis. The volume is liberally illustrated but no references to other literature are included.

GREENHILL, JACOB PEARL

Office gynecology Fifth edition, revised and enlarged. Chicago The Year Book Publishers, Inc. 1948 461 p illus. 21 cm. $5.25 1153

Contents (abridged) Office equipment necessary for gynecologic practice. The gynecologic examination. Diagnosis and treatment of trichomonas vaginalis vaginitis. Vaginal and vulvar discharges due to mycotic and similar organisms. Vulvovaginitis in children gonorrheal and nonspecific. Gonorrhea in adults. The uterine cervix its disturbances and their treatment. Dyspareunia and frigidity Sterility The Rubin test transuterine insufflation of gas. Artificial insemination. Vaginal heat therapy Vaginal douches Backache. Control of conception. Sterilization by coagulation of the uterine cornu General anesthesia for office procedures. Office treatment of Bartholin's gland abscess and cyst. Gynecologic and obstetric endocrinology Normal menstruation. Menstrual irregularities. The climacteric or menopause. Cancer of the uterus. Diagnosis of uterine cancer by vaginal smears Office urology Anorectal diseases. Obesity Premarital examination and advice. Index.

Note A concise manual for general practitioners of medicine and young doctors just beginning to practice in gynecology It covers not only the medical aspects of gynecologic ailments but also the techniques of most minor operations that can be performed without employing hospitalization. In this edition two chapters have been added and several rewritten. New material is included on many topics including trichomonas vaginalis vaginitis, gonorrhea, sterility menstrual irregularities, and diagnosis of uterine cancer There are now 131 figures.

JANNEY JAMES CRAIK

Medical gynecology Philadelphia W B Saunders Company 1945 389 p illus. 24 cm. $6 00 1154

Contents (abridged) Section I, History and physical examination. Section II, The patients' complaints. Amenorrhea Hemorrhage after the menopause. Vaginal discharge. Tumors of external genitals. Abdominal enlargement. Abdominopelvic pain. Backache. Sexual maladjustment. Urinary disorders. Sterility The menopause. Section III, Physical findings: Cervical lesions. Retroversion of the uterus. Relaxed vaginal outlet and prolapse. Congenital malformations. Adhesions of the clitoris. Fistulas. Endometriosis. Section IV Tests and special examinations: Examination of urine. Smears, wet preparations, cultures. Biopsy Tubal insufflation (Rubin test) Aschheim-Zondek and other tests for pregnancy Section Gynecologic treatments: Rest. Antiseptics. Local applications. Pessaries. Hemostatics. Cauterization, coning, and fulguration Foreign protein therapy Vitamin therapy Endocrine therapy Chemotherapy Anesthetics. Section VI, Socio-medical problems in gynecology: Contraception. Preparation for marriage. Marital maladjustments. Section VII, Irradiation or operation. Bibliography Index.

Note A clearly written and rather informal textbook and office manual As the title indicates, it does not cover surgical aspects of the subject. Psychological, emotional, social, and economic factors are considered as well as the strictly medical aspects. The author succeeds in bringing out the necessary correlation between the classic picture and symptoms of disease and the actual complaint and findings expressed by the patient in the doctor's office. There are

ninety-seven figures. The bibliography is short and has been selected from the viewpoint of the general practitioner he will occasionally need more information on specific subjects. Mostly it is limited to recent books but few periodical articles are included.

LULL, CLIFFORD BELL editor
Management in obstetric complications. Philadelphia J B Lippincott Company, 1945 235 p illus. 24 cm. (The American practitioner series) $5 00 1155

Contents: Toxemias of pregnancy by F S. Kellogg and A. T Hertig. Ectopic pregnancy, by E. Allen. Abortion, by J Gilmore. Complications of the third stage of labor by D. Findley Surgical complications of pregnancy by J P Greenhill. Puerperal infection, by C. E. Galloway Management of some abnormal presentations, by O. Moore. Infections of vagina during pregnancy by J Bernard Bernstine. Placenta previa and premature separation of the normally situated placenta, by R. L. Barrett. Index.

Note. The papers constituting this volume have been prepared by experts in the field and are designed to serve as refresher course for obstetricians who may have been temporarily separated from their specialty The book will also be of value to the general practitioner requiring knowledge of particular phases of obstetrical practice. Each paper stresses the practical aspects of the subject with due emphasis on diagnosis and treatment, and together they provide concise review of current opinion regarding some of the more common and serious obstetrical problems. All but four of the papers include brief bibliographies.

MCCORMICK CHARLES OWEN
A textbook on pathology of labor, the puerperium and the newborn. Second edition. With 272 illustrations including 24 in color St. Louis The C. V Mosby Company 1947 514 p illus. (part col d) 25 cm. $8 50 1156

Contents: Part I, Pathology of labor Abnormal labor Obstetric injuries. Postpartum hemorrhage. Obstetric operations. Part II, Pathology of the puerperium Puerperal infection. Secondary or late postpartum hemorrhage (puerperal hemorrhage) Anomalies and diseases of the breasts. Other complications of the puerperium. Part III, Pathology of the newborn. Conditions related to delivery (accidents and injuries) Conditions of congenital origin (malformations) Conditions peculiar to newborn period. Appendix Index

Note This volume is based on series of lectures given by the author at Indiana University The instructions for carrying out measurements and other methods of diagnosis, and the descriptions of abnormal conditions and their treatment, are clear and concise. An outline-like organization of the text facilitates its use for quick reference purposes. In this revision the illustrations, which form valuable feature of the book, have been increased The textual additions include new sections on the conduct of the third stage of labor the author's technique of external version, conduct of impacted shoulder and an expanded discussion of the Rh factor and Cesarean section.

MAZER CHARLES AND S LEON ISRAEL
Diagnosis and treatment of menstrual disorders and sterility Second edition, revised and enlarged, with 133 illustrations. New York Paul B Hoeber Inc. Medical Book Department of Harper & Brothers 1946 570 p illus. (part col d) 24 cm. $7 50 1157

Content (*abridged*) Puberty in the female. The normal menstrual cycle. The hormone balance of the normal menstrual cycle. Dysmenorrhea as an abnormal manifestation of the menstrual cycle. Premenstrual tension as an abnormal manifestation of the menstrual cycle. Migraine as an abnormal manifestation of the menstrual cycle Breast hyperplasia as an abnormal manifestation of the menstrual cycle Cyclic intermenstrual pain (Mittelschmerz) as an abnormal manifestation of the menstrual cycle Amenorrhea Uterine bleeding Sterility Artificial insemination The diagnosis and treatment of male sterility by Charles W Charny Appendix Index.

Note (1568) Although intended for both students and practitioners of medicine, this work is primarily aimed at the family physician he is usually the first to see and treat women who are suffering from sterility and menstrual disorders. Procedures which can be carried out in the physician's office are emphasized. Treatments which require special technical skill or elaborate equipment available only in hospitals are not described in detail. In preparing the work for the second edition all but four of the original chapters were rewritten and an entirely new chapter on the toxemias of pregnancy including the Rh factor was added. Unusually long lists of references appended to the chapters serve to guide the book's users to longer discussions of special topics. A twelve-page appendix lists commercially available endocrine products and indicates their relative concentrations.

MEIGS, JOE VINCENT, AND SOMERS H. STURGIS editors
Progress in gynecology New York Grune & Stratton 1946 552 p illus. (part col d) 23 cm. $7.50 1158

Contents (*abridged*) Growth and physiology: Embryology and development of the female reproductive tract, by W Schiller The morphological and endocrine basis for menstrual bleeding, by J. E. Markee. Evidence for and the significance of menstrual toxin, by O. Watkins Smith and G. Van S Smith. Transfusion with particular reference to the Rh factor in gynecology by L. K. Diamond. Diagnostic methods. Hormone assays—methods and collections, by P H. Benedict Vaginal smears for the determination of ovarian function, by A. E. Rakoff. Pelvic culdoscopy by Albert Decker Functional disorders: Amenorrhea—diagnosis and treatment, by I. F Rubin. Leukoplakia, pruritus, and senile changes, by W E. Hill. The psychiatric component in gynecology by H. Deutsch. Interrelationship of endocrine glands Hormones in relation to tumors in the female, by I. T Nathanson. The pituitary body and the menstrual cycle, by K. W Thompson. Androgen therapy in gynecology, by U J. Salmon. Sterility and reproduction Causes and relief of infertility by J Rock. Diagnostic techniques and treatment of the sterile couple, by F A. Simmons. Habitual abortion, by M. J. Eastman. Infections and their treatment. The treatment of vulvovaginitis in children, by H. S. Everett. Trichomonas vaginalis vaginitis, by S. J. Kleegman. Benign growths: Treatment of the fibroid uterus, by W T Dannreuther Benign ovarian tumors without functional significance, by H. Ulfelder Malignant growths: Treatment of carcinoma of the ovary by F A. Pemberton. Cancer of the cervix—principles of radiation treatment, by A. N Arneson. The Wertheim operation by J V Meigs. Carcinoma of the vulva, by L. Parsons. Supervoltage X-ray treatment, by R. Dresser Operative technique: Tubal sterilization, by S. H. Sturgis. Vaginal hysterectomy by A. D. Campbell. The Manchester Fothergill operation by T L. Montgomery Stress incontinence of urine, by A. H. Aldridge. Vaginal atresia and constriction of the vagina, by L. R. Wharton. Preoperative and postoperative care: Chemotherapy in gynecologic surgery and pelvic infections, by C. Lyons. Anesthesia for gynecological procedures, by H. K. Beecher The surgical relief of pain due to pelvic malignancy by O Hurrat. Index.

Note. Seventy papers, of which only selection are listed above, are contained in this volume. All are written by specialists in the field, and many are accompanied by short lists of the literature that relates to the topic of the paper The book is intended primarily to provide medical practitioners and students with survey or summary of recent developments and practices. A comprehensive index covering all of the papers is included.

MENGERT WILLIAM F
Postgraduate obstetrics. With 123 illustrations Drawings by Ruth Maxwell Sanders. New York Paul B Hoeber Inc. Medical Book Department of Harper & Brothers, 1947 392 p illus. 24 cm. $5 00 1159

Contents (*abridged*) Section I, Pregnancy The diagnosis of pregnancy Minor ailments of pregnancy Disease complications related to pregnancy Intercurrent diseases unrelated to pregnancy Abortion and premature labor Abnormal pregnancy Antepartum hemorrhage—placenta previa and premature separation. Estimation of the bony pelvis. Section II, Labor Obstetric analgesia and anesthesia. Postpartum hemorrhage. Repair of tears. Obstetric forceps. Cesarean section. Anomalies of the expulsive forces. Miscellaneous complications of labor Section III, The puerperium: Anomalies, injuries, and diseases of the newborn. Puerperal infection. The follow-up examination. Sterility The emotional stresses of pregnancy Laboratory and technical procedures. Appendix Nursing technics. Index.

Note. Rather than treatise for study by graduate students preparing to specialize in obstetrics, this book is manual for general practitioners of medicine in small and medium-sized communities. The topics considered and the space given to each have been selected and proportioned to meet the requirements of physicians in such practices. Rare conditions have been omitted or are discussed very briefly but common conditions and the most practical current techniques are discussed fully and clearly There is also some ma-

terial on allied topics such as sterility. There are about one hundred illustrations, and short lists of references to other literature are appended to the chapters.

NATIONAL RESEARCH COUNCIL. CONFERENCE OF THE COMMITTEE ON HUMAN REPRODUCTION

The normal and pathological physiology of pregnancy Proceedings of the Conference on behalf of The National Committee on Maternal Health, held in New York City, January 1948 Baltimore The Williams and Wilkins Co 1948 176 p. illus 26 cm. $2 75 1160

Contents Some functional activities of trophoblast, by G. B. Wislocki, E. W Dempsey and D W Fawcett. Placental dysfunction in eclamptogenic toxemias, by E. W Page. Patterns of uterine contractions in women during pregnancy by S. R. M Reynolds, L. M. Hellman, and P Bruns. Pregnancy and the thyroid gland, by J P Peters, E. B Man, and M. Heinemann. The excretion of various hormone metabolites in normal pregnancy by E. Venning. Urinary excretion of ketosteroids in pregnancy by K. Dobriner and others. Endocrine patterns in abortion, by E. Delfs and G. E. S. Jones. Experimental studies on nutrition in pregnancy by J. Warkany. The biochemical assessment of nutritional status during pregnancy, by W J Darby R. O. Cannon, and M. M. Kaser Nutritional needs in pregnancy in relation to nutritional intakes as shown by dietary histories, by B. S. Burke. Diet studies in pregnant patients, by W J Dieckmann and others. Hemorrhagic tendencies in toxemia of pregnancy (practical evaluation and management) by F S. Kellogg. Liver function in pregnancy by E. W Mussell. The clinical management of the late toxemias of pregnancy by S. A. Cosgrove and L. C. Chesley

Note. The proceedings of conference which had as its main object the stimulation of further research in certain basic problems in the physiology of pregnancy The method was to present papers which summarize the existing knowledge in selected areas where it is known that our information is incomplete. As printed here each of them is supplemented by bibliography of the significant literature and by report of the discussion which followed its presentation at the meeting

NOVAK, EMIL

Gynecological and obstetrical pathology with clinical and endocrine relations. Second edition with 542 illustrations 15 in color Philadelphia W B Saunders Company 1947 570 p illus (part col'd) $9.00 1161

Contents (abridged) The endocrinology of the menstrual cycle and pregnancy Diseases of the vulva. Diseases of the vagina. Cervicitis, cervical erosion and cervical polyps. Carcinoma of the cervix. Hyperplasia of the endometrium. Endometritis, endometrial polyps, myometritis. Myoma of the uterus. Sarcoma of the uterus. Salpingitis Tumors of the tube, parovarium, and uterine ligaments. Inflammatory diseases of the ovary Non-neoplastic cysts of ovary Cystadenoma of the ovary Primary carcinoma of the ovary Granulosa cell carcinoma, thecoma and luteoma (including mesenchymomas of the ovary) Arrhenoblastoma of the ovary adrenal tumors of ovary luteoma (masculinizing tumors) Ectopic pregnancy Pelvic endometriosis. Hydatidiform mole and chorionepithelioma malignum. Abnormalities and diseases of the placenta and appendages (other than hydatidiform mole and chorionepithelioma) by L. M. Hellman. Index.

Note (2370) In this text the author has endeavored to meet the needs of students, practitioners, specialists, and pathologists. It discusses all but few rare lesions, but emphasizes those disorders most commonly met in practice. Special attention is also given to the correlation of pathology with clinical practice, and to the endocrinologic aspects of the subject. The majority of the illustrations are taken from the laboratory of the Johns Hopkins Medical School. In this revision well over hundred microphotographs and new illustrations of gross lesions have been added. Text and chapter bibliographies have undergone some revisions in the light of newer studies.

NOVAK EMIL

Textbook of gynecology Third edition Baltimore The Williams & Wilkins Company 1948 742 p illus. (part col d) 23 cm. $8 00 1162

Contents (abridged) The gynecological history and examination. The endocrine mechanism of menstruation and pregnancy Cyclical histology of the genital tract. Clinical features of menstruation. Congenital anomalies of the female generative organs. Diseases of the vulva. Diseases of the vagina. Carcinoma f the cervix. Genital lacerations, relaxations and fistulas. Displacements of the uterus. Sarcoma of the uterus. Tuberculosis of female generative organs. Malignant tumors of the ovary—carcinoma of the ovary Endometriosis. Ectopic pregnancy Leukorrhea. Backache in women. Problems of sex life. General principles of gynecological organotherapy Amenorrhea and hypomenorrhea. Dysmenorrhea. Uterine bleeding. Sterility Pregnancy conditions in gynecological practice. Common disorders of the female urinary organs, by H. S. Everett. Index.

Note (2371) A comprehensive presentation of the biological aspects of gynecology which have assumed great importance as the result of modern developments in the knowledge of reproductive physiology and endocrinology It is designed for both undergraduate medical students and graduate practitioners. Diagnosis and treatment are emphasized throughout the book. Operative techniques are not included. In preparing this third edition no extensive changes were made in the text of the second edition but numerous minor changes were made which, together have extended the length of the book by thirty-four pages. There are now 484 figures, of which fair proportion is in color The lists of references have also been revised to incorporate the recent literature of interest.

PAPANICOLAOU, GEORGE NICHOLAS, AND OTHERS

The epithelia of woman s reproductive organs a correlative study of cyclic changes, by George N Papanicolaou Herbert F Traut and A. A. Marchetti. New York The Commonwealth Fund, 1948. 53 p illus. (part col d) 28 cm. $10 00 1163

Contents Introduction. The material and methods. The classification of the menstrual cycle. The ovaries. The epithelium of the fallopian tubes. The epithelium of the uterine mucosa. The epithelium of the endocervical glands. The epithelium f the vagina and the portio vaginalis of the cervix (ectocervix) The cytology of the vaginal fluid and the vaginal smear. The cytology of the endometrial and endocervical fluids. Correlation of cyclic changes. Bibliography Plates.

Note The principal aim of this detailed study is clarification of existing knowledge covering cell structures and their physiologic morphologic relationships in the epithelial portions of human female genitalia. Cytologic changes that occur during all phases of the menstrual cycle are minutely described, illustrated, and tabulated. Twenty-one pages of colored plates containing photomicrographs and drawings are included. The bibliography contains references to ninety articles and books selected from the international literature.

RICCI JAMES VINCENT

Diagnosis in gynaecology a classification of gynaecological diseases based on aetiology and the clinical logic for diagnosis. Philadelphia The Blakiston Company 1948 259 p illus. 22 cm. $4.50 1164

Contents (abridged) Anatomy and histology of the genital structures and adjacent organs. Female sex hormones—source, chemistry and function. Gynaecological examination, outline, and routine. Gynaecological symptoms. General classification of gynaecological diseases. Dermatological diseases of the vulvovaginal and perineal areas. Classification of diseases of the cervix based on aetiology Diseases of the intrapelvic genitalia—classification of diseases of the uterus based on aetiology Classification of diseases of the tubes based on aetiology Classification of ovarian diseases based on aetiology Classification of diseases of the genital ligaments and the parovarium based on aetiology Index

Note: A textbook for medical students and general practitioners based on clinical demonstrations given by the author at the New York Medical College. Its purpose is to teach the art of taking gynaecological history and the methods of conducting examinations leading to correct diagnosis. A knowledge of the fundamentals of gynaecology is assumed and the discussion of all subjects is generally that of the clinical observer The various subjects are rather broadly surveyed, more detailed discussion being left to standard textbooks on gynaecology

RICCI JAMES VINCENT

One hundred years of gynaecology 1800–1900 a comprehensive review of the specialty during its greatest century with summaries and case reports of all diseases pertaining to women. Philadelphia The Blakiston Company 1945 651 p 27 cm. $8.50 1165

Contents (abridged) Medical trends of the nineteenth century. Treatment of ovarian cyst Ovarian pathology Genital fistulae and methods of repair Pathology and therapy of the ureters and urethra. Early laws on fibroids and polyps. Pathology of fibroids. Cervical malignancy and therapy Extra-fundal pregnancy and therapy Prolapse and inversion of uterus (causes and therapy) Perineal injuries and repair Leucorrhoea. Cervical ulcerations and lacerations. Uterine deviations and therapy Inflammatory diseases of the pelvic organs. Tuberculosis of the genitalia. Bacterial invasions of the female genitalia. Syphilis of the genitalia. Genital hernias. Genital malformations and rarities. Degenerative changes of the products of conception. Abortions and post-abortal complications. Adenomyometrium changes. Memoirs in gynaecology by H. C. Coe. Index of personal names. Index of subjects.

Note: (1574) In his *Genealogy of gynaecology* the author outlined the history of this branch of medicine to 1800 A D In this companion work he provides a much more detailed book on the specialty during the nineteenth century The international literature is surveyed and is cited in thousands of footnote references. Each chapter devoted to a subtopic is developed in approximate chronological order and the contributions of physicians and surgeons are concisely summarized and dated. The work is designed for reference use.

RUBIN ISIDOR CLINTON

Uterotubal insufflation a clinical diagnostic method of determining the tubal factor in sterility including therapeutic aspects and comparative notes on hysterosalpingography With 159 illustrations including 4 in color St. Louis The C V Mosby Company 1947 453 p illus. 25 cm. $10 00 1166

Contents (abridged) Part I, Anatomy pathology and physiology of the fallopian tube. Part II, Technique of tubal insufflation—diagnosis: Indications and contraindications for the use of uterotubal insufflation. Peritubal adhesions, tubal strictures, and uterotubal spasm Sterility (due to tubal occlusion of nonvenereal origin) Part III, Therapy Part IV Comparison of kymographic tubal insufflation and intrauterine injection of lipiodol and other iodized oils Part Appendix: Modifications of the insufflation apparatus for the Rubin test. Gases employed in insufflation. Treatment of dysmenorrhea by uterotubal insufflation. The application of pneumoperitoneum to gynecology References. Index

Note. The author of this detailed study of uterotubal insufflation is one of the pioneers in the development and use of this now well established procedure for the determination of tubal patency by nonsurgical means in cases of feminine sterility. Attention is also given to the subject of hysterosalpingography in general and in particular to the results of lipiodol methods and similar iodized oil injections as compared to the use of insufflation. Throughout the book major emphasis is placed on the clinical aspects of the subject. Analyzed and tabulated data are presented from approximately 350 detailed questionnaire responses from physicians of many nations who have used this technique. A large number of case histories are included along with many plates, charts, tables, and a twenty-five page bibliography

STANDER, HENRICUS JOHANNES

Textbook of obstetrics designed for the use of students and practitioners Stander's third revision. New York D Appleton-Century Company Incorporated 1945 1277 p illus. (part col d) 25 cm. $11.00 1167

Contents (abridged) Anatomy The female organs of reproduction. Physiology and development of the ovum Menstruation. Maturation, fertilization and development of the ovum The fetus Physiology of pregnancy Changes in the maternal organism resulting from pregnancy. Endocrine function in pregnancy Conduct of pregnancy Diagnosis of pregnancy The management of normal pregnancy Physiology and conduct of labor at the puerperium The forces concerned in labor. Mechanism of labor in vertex presentations. Mechanism of labor in face, brow and breech presentations. Amnesia, analgesia and anesthesia in labor Multiple pregnancy Pathology of pregnancy The toxemias of pregnancy Complications due to diseases and abnormalities of the generative tract. Diseases and abnormalities of the fetal membranes and placenta. Abortion and premature labor Extra-uterine pregnancy Abnormal pelvis. Pathology of labor Course, prognosis and treatment of pregnancy and labor complicated by the more common forms of contracted pelvis. Dystocia due to abnormalities in development or presentation of the fetus. Hemorrhage. Injuries to the birth canal. Operative procedure Forceps. Cesarean section. Destructive operations. Pathology of the puerperium Causes of sudden death—maternal mortality Diseases and abnormalities of the puerperium. Index.

Note: (1578) In this third revision by Stander of Obstetrics, by J W Williams, Stander's name has at last been put at the head of the title page as the author In its various editions the work has been a standard textbook in American medical colleges for many years. It is also a valuable reference book for graduate practitioners who handle obstetrical cases in general practice. In this edition considerable amount of reorganization has been carried out, and some new material has been added. The purpose of this reorganization was to facilitate future revisions and also to make the book more adaptable as a teaching text. The added material has to do with such topics as the recent reduction in maternal mortality and the present effort to bring about a decrease in fetal mortality; the treatment of the complications of pregnancy and the use of sulfonamide drugs and penicillin in puerperal infections. The work is fully illustrated and contains exceptionally good bibliographies.

TE LINDE, RICHARD WESLEY

Operative gynecology With 309 illustrations in black and white and 15 subjects in full color on 9 plates. Philadelphia J B Lippincott Company 1946 751 p. illus. (part col d) 26 cm. $18 00 1168

Contents (abridged) Armamentarium. Anesthesia in gynecology Postoperative care and complications. Retrodisplacement of uterus. Prolapse of uterus. Urethrocele cystocele and stress incontinence of urine Urinary incontinence not curable by sphincter plication. Vesicovaginal and urethrovaginal fistulae. Complete perineal lacerations and rectovaginal fistulae. Myomata uteri. Nonmalignant cervical lesions and their treatment. Dilatation of the cervix and curettage of the uterus. Cancer of the cervix uteri. Carcinoma of the corpus uteri. Endometriosis Gonorrhea and its complications Abortion. Tuberculosis of the female generative organs. Sterility Ectopic pregnancy Peritoneoscopy Ovarian tumors. Congenital absence of the vagina. Surgical conditions of the vulva and the vagina. Surgery of the abdominal wall. Appendicitis. The intestines in relation to gynecology Estrogen therapy of the menopause. Index

Note. A comprehensive and up-to-date treatise designed especially for medical school graduates who are preparing to specialize in gynecology However it contains much material which is of interest also to established surgeons and gynecologists. It is based on the author's experience and that of his colleagues at Johns Hopkins Hospital, and describes what he considers to be the best modern techniques. Instruments and procedures originated by others are identified with the names of the originators, but other historical material is excluded. Conditions which require surgery and the surgical techniques for treating them are described explicitly Most of the illustrations are reproduced from original drawings and are excellent. Numerous lists of related literature are included.

TITUS PAUL

The management of obstetric difficulties. Third edition with 426 illustrations and 8 color plates. St. Louis The C. V Mosby Company 1945 1000 p illus. (part col d) 25 cm. $10.00 1169

Contents (abridged) Section I, Sterility Section II, Difficulties in diagnosis of pregnancy Section III, Complications of pregnancy: Anomalies and diseases of the generative tract during pregnancy General surgical complications of pregnancy. General systemic diseases complicating pregnancy Abortion and premature labor Ectopic pregnancy Placenta previa and premature separation of the normally implanted placenta. Multiple pregnancy Toxemia of pregnancy Section IV Complications of labor: Dystocia from anomalies of uterine contractile forces. Dystocia from developmental anomalies and gynecologic abnormalities. Dystocia from contracted pelvis and its management. Dystocia due to fetal complications. Intrapartum and postpartum hemorrhage. Injuries to birth passages and adjacent organs. Section Obstetric operations: Induction of abortion. In-

duction of labor Forceps. Version and breech extraction. Hebosteotomy Cesarean section. Operations for diverse obstetric complications. Section vi, Complications of the puerperium Diagnosis and treatment of puerperal infection. Abnormalities of the puerperium. General medical and surgical complications of the puerperium. Section vii, The newborn infant: Accidents and birth injuries. Asphyxia of the newborn and its treatment. Section viii, General: Preparation for obstetric operations. Obstetric analgesia and anesthesia. Intravenous infusions and transfusions. Index.

Note Normal pregnancy and normal labor are not included in this text which deals only with abnormal phases of obstetrics and the techniques of operational procedures indicated by the emergency Based on the experience of the author as an obstetric specialist, the book is designed for advanced students and interns as a working aid in diagnosing and handling complications. To the general practitioner encountering the same difficulties, it is also of practical value in supplying readily accessible information to supplement his judgment. In this edition the development and use of penicillin have necessitated the inclusion of new material covering the dosage and techniques of administration in the treatment of puerperal sepsis, pyelitis, syphilis, and other infections. Other chapters on sterility antepartum care, blood transfusions, and the Rh factor have been extensively revised and new sections added on caudal analgesia, extraperitoneal cesarean section, etc.

WHARTON, LAWRENCE RICHARDSON

Gynecology with a section on female urology Second edition with 479 illustrations. Philadelphia W B Saunders Company 1947 1027 p. illus 25 cm. $12 00. 1170

Contents (abridged) Part i, Gynecology: Anatomy and supporting structures. Embryology and congenital malformations. Physiology and functional disturbances. The gynecologic examination. Childbirth injuries. Displacements of the uterus and fistulas. Pelvic infections. Diseases of the vulva, by L. A. Gray Diseases of the vagina. Diseases of the cervix. Diseases of the uterus. Diseases of the fallopian tubes and ovary Endometriosis, sterility extra-uterine pregnancy and abortion. Intestinal complications and appendicitis in gynecology Postoperative care and normal hygiene. Part ii, Female urology: Anatomy and methods of urologic diagnosis. Urinary obstruction. Urinary infections. Urinary stone. Tumors and injuries of the urinary organs. Ureteral implantation and chemotherapy Index.

Note (1143) A well-written comprehensive treatment. The main point of view is physiological and although surgical techniques are thoroughly covered, there is somewhat more emphasis on medical gynecology and on preventive techniques and adequate diagnostic study in order to avoid unnecessary surgery The extensive coverage of female urology is a noteworthy feature. In this second edition changes and additions have been made to cover recent developments in chemotherapy; sections on embryology and congenital malformations have been reorganized, a chapter on water cystoscopy has been added to the section on female urology; and the chapter on the female urethra is a new addition. The reading lists at the ends of the chapters have been revised to include the recent literature.

YEAR BOOK OF OBSTETRICS AND GYNECOLOGY

The 1948 Year book of obstetrics and gynecology edited by J P Greenhill. Chicago The Year Book Publishers, Inc. 1949 603 p. illus. 19 cm. (The practical medicine year books) $4 50 1171

Contents: Obstetrics: Pregnancy Labor Puerperium. The newborn. Gynecology General principles. Diagnosis. Infertility Ectopic pregnancy Operative technic. Infections. Benign tumors. Special ovarian tumors. Malignant tumors. Menstruation and its disorders. Endocrinology Index. Index to authors.

Note. (1147) An illustrated manual which covers the progress in management of diseases of women together with details of numerous diagnostic measures and therapeutic procedures applying to a variety of pathologic conditions. It is edited and organized similarly to other books in the same series. The chapters consist of abstracts of significant articles selected from the world's medical literature. Each abstract is accompanied by a footnote reference to the original publication, and there are frequent evaluatory comments by the editor There is a generous number of illustrations—111 in the issue at hand.

SURGERY

GENERAL

BANCROFT, FREDERIC WOLCOTT editor

Surgical treatment of the soft tissues. Associate editor George H. Humphreys II. With 244 illustrations Philadelphia J B Lippincott Company 1946 520 p illus 26 cm. $15.00 1172

Contents: Section One, Hernia. Basic considerations in hernia, by F W Bancroft. Inguinal hernia, by C. G. Burdick. Femoral hernia, by B. L. Coley Treatment of cryptorchidism, by F Beekman. Umbilical, epigastric, and incisional hernia, by W H. Cole. Unusual hernias, by J E. Sullivan. Complications of hernia, by R. V Grace and V R. Johnson. Section Two, Superficial injuries Injuries of skin and subcutaneous tissues, by G H Humphreys, II. Tendon injuries of the hand, by W C. Seely Compound facial injuries, by J B. Brown. Plastic surgery by E. A. Kitlowski. Section Three, Burns and freezing Treatment of burns and freezing, by H. N Harkins. Section Four Infections Infection of skin and subcutaneous tissues, by G. H. Humphreys, II. Infections of the hand, by P A. Wade. Chemotherapy in surgical practice, by J. S. Lockwood. Section Five, Neoplasms Neoplasms of skin and subcutaneous tissues, by G H Humphreys, II. Benign lesions of the mammary gland, by J. S. Rodman Cancer of the mammary gland, by D B. Guthrie. X-ray treatment of neoplasms, by F E. Adair Section Six, Arteries Surgery of the large arteries, by L. G. Herrmann and M. R. Reid. Section Seven, Veins and lymphatics Surgery of the veins, by J Homans Surgery of the lymphatics, by V C. David. Index.

Note In this volume are treated various topics in surgery which are of great importance in many operations, require great skill, and yet are less standardized than other techniques. The procedures discussed and illustrated are the ones which in the opinion of the editors and authors are most generally valuable. In other words, no attempt has been made to be completely comprehensive. The section on plastic surgery includes not only the treatment of injuries but also congenital defects such as hare lip. The section on chemotherapy contains [illegible] thorough discussion of the sulfonamides and penicillin. The section on surgery of the arteries and veins necessarily includes an exceptional amount of anatomical material. There are 242 excellent illustrations, and variable bibliographies at the end of each chapter.

BOYD WILLIAM

Surgical pathology Sixth edition with 530 illustrations including 22 color figures. Philadelphia W B Saunders Company 1947 858 p illus. (part col d) 24 cm $12 00 1173

Contents (abridged) Inflammation and repair Gangrene. The infective granulomata. Hemorrhage, thrombosis, and embolism Surgical shock. Tumors Cysts. Neck, salivary glands, and esophagus The thyroid gland Lips, mouth, and tongue The stomach and duodenum. The intestines. The vermiform appendix The rectum The gall bladder and liver The pancreas The peritoneum The urinary tract. Male reproductive system Female reproductive system. The breast. Diseases of the arteries and veins. The spleen. The lymphatic system The cranium and its contents. The spine and spinal cord. Diseases of bones. Diseases of joints. The muscles, tendons, and bursae Surgical pathology of the thorax. Middle ear inflammation. Index.

Note (1506) In this standard book pathology is presented from the surgeon's viewpoint The author's aim is to show disease processes as the surgeon sees them in the operating room and to supply supplementary information on diseases which will be helpful to surgeons. The discussion of specific diseases varies widely because the author has selected from general pathology only those topics which he knows are of interest to surgery However symptoms, etiology gross and microscopic anatomy prognosis, and radiology are among the aspects discussed in appropriate cases Changes in the present edition include [illegible] number of new illustrations and new text material on wounds and general heart disease, tumors of the larynx, the milk factor in relation to carcinoma of the breast, sulfonamides in cancer of the mouth, the Papanicolaou vaginal smear technique for diagnosis of cancer of the cervix, and other topics. Some of the new material is based on experience gained during the recent war The illustrations include numerous reproductions of microphotographs.

CHRISTOPHER, FREDERICK

Minor surgery Sixth edition. With 937 illustrations on 595 figures. Philadelphia W B Saunders Company 1948 1058 p. illus. 24 cm. $12 00 1174

Contents Closed wounds. Open wounds. Infections of the skin and subjacent tissues. Burns. Foreign bodies. Injuries by electricity Circulatory disturbances and gangrene. Injuries of the head Infections of the head. Tumors and deformities of the head Injuries and infections of the neck. Tumors and deformities of the neck. Injuries and infections of the trunk. Tumors and deformities of the trunk. The male genitourinary organs. The female genitourinary organs. The anal canal and rectum. Injuries of the upper extremity Infections of the upper extremity Tumors and deformities of the upper extremity Injuries of the lower extremity Infections, tumors and deformities of the lower extremity Minor surgical technic. Preoperative and postoperative care. The surgical intern. Index.

Note: (1592) An exceptionally comprehensive manual which covers the very large group of surgical procedures which must frequently be done by general practitioners, hospital house officers, and other medical men who are not specialists in surgery It is also of interest to advanced medical students. Although most of the space is given to [illegible] description of actual surgical technique, symptoms, diagnosis and non-surgical treatments are also considered. Although the work is only about fifty pages longer than the first edition, many changes have been made. These include new material on the antibiotics and other new chemotherapeutic agents and new methods of treating burns, varicose veins, hemorrhage, refrigeration anesthesia, the use of novocaine for ankle sprains, the Rh factor and shock Appropriate additions have been made in the bibliographies and illustrations.

CHRISTOPHER, FREDERICK, editor

A textbook of surgery by American authors. 1483 illustrations on 762 figures. Fourth edition revised and reset. Philadelphia W B Saunders Company 1945 1548 p. illus. 26 cm. $12 00 1175

Contents (abridged) Inflammation and repair of tissue. Bacteriology of surgery Anthrax, fungus infections, and tularemia. Thermal, chemical, electric, and irradiation injuries. The skin and subjacent tissues. Military surgery Tendons, tendon sheaths, and fascial spaces Muscles and ligaments. The bursae. The vascular system. The lymphatic system The endocrine system. The nervous system. Orthopedic surgery Infections and tumors of bone. Fractures. Dislocations. The head. The neck. The breast. The thoracic wall, pleura and lungs. The heart and pericardium. The mediastinum, including the esophagus. The abdominal wall. The peritoneum. The stomach and duodenum. The small and large intestine. Anal canal and rectum The liver and biliary system The pancreas. The spleen. The hernia. The genitourinary tract. Gynecology Plastic surgery. Roentgenology Aseptic surgical technic. Minor surgical procedures Anesthesia Preoperative and postoperative care. Index.

Note This textbook for students and reference book for surgeons contains in one volume [illegible] cross section of the best in American surgery. One hundred and eighty authors have contributed concentrated articles which give the basic facts on [illegible] very large group of conditions, both general and special. The overall plan of the work has not been changed in this edition, but there are many changes in detail. There has been [illegible] variable amount of rewriting of old sections, and [illegible] substantial amount of totally new material has been added. There are complete new chapters on military surgery and on chemotherapy of surgical infections, as well as [illegible] long list of new sections within the larger headings on such topics as shock, vascular disease, tumors, tumors of the sympathetic nervous system, fractures of the

radius and ulna, and wounds of the thorax. The illustrations are adequate but not exceptional by comparison with other books on the same subject.

COLE WARREN HENRY, AND ROBERT ELMAN

Textbook of general surgery Fifth edition New York D Appleton-Century Company Incorporated, 1948 1160 p illus. 25 cm. $11 00 1176

Contents (abridged) The surgical history and examination. Bacterial inflammation. Acute surgical infections. Miscellaneous infections. Ulcer gangrene sinus, fistula. Surgical convalescence—preoperative and postoperative care. Anesthesia. Wounds. Amputations. Surgery in diabetes. Shock and hemorrhage. Thermal, chemical and electrical trauma. The emergency prostrate patient—coma unconsciousness, delirium and convulsions. Neoplasms and cysts. Fractures, dislocations and sprains. The organs of movement—bone, joint, bursa, tendon and muscle. Blood vessels. The lymphatic system. The nervous system. Liver gallbladder pancreas, and spleen. The alimentary tract. The peritoneal cavity. Hernia. The breast. Surgical diseases of the chest, by E. A. Graham and T. H. Burford. The endocrine glands. Gynecology. The genito-urinary system. Military surgery by F. B. Berry. Index of authors. Subject index.

Note. (1944) In this standard work the main viewpoint is pathological; and considerable material is included on non-surgical therapies. In the present edition the basic plan of the book is the same as in the previous one. Although the changes made were extensive enough to require resetting of type and renumbering of the pages, only a small fraction of the matter has been newly added. However there is a new chapter on pre- and post-operative care, new material on military surgery and new material on chemotherapy in addition to minor changes in other parts of the book. The illustrations have been revised somewhat and many of the bibliographies have been expanded to include pertinent literature published since 1944

CRILE, GEORGE JR., AND FRANKLIN L. SHIVELY, JR.

Hospital care of the surgical patient a surgeon s handbook with an appendix on the treatment of wounds Second edition. Foreword by Evarts A. Graham. Springfield, Ill. Charles C Thomas, 1946 288 p illus. 21 cm. $4 50 1177

Contents (abridged) Section I, Physiologic principles related to the care of the surgical patient: Water balance. Chloride balance. Use of glucose and saline. Acidosis and alkalosis. Serum proteins. Healing of wounds—physiology pathology and pharmacology. Section II, Management of surgical complications: Focal inspection. Overdistended bladder. Wound infections. Wound disruption. Hemorrhage. Uremia. Intestinal obstruction and peritonitis. Hiccoughs. Shock and burns. Obstructive jaundice. Surgery of the aged. Surgery of infants. Urinary tract infections. Acute cardiac complications. Convulsions. Resuscitation from sudden death. Small intestinal fistulae. Impending circulatory gangrene. Section III, Preparation of the patient for operation. Section IV Postoperative care. Section V The technic of common hospital procedures. Lumbar puncture. Catheterization. Parenteral administration of fluids. Blood transfusion. Tracheotomy. Gastric and intestinal intubation. Oxygen therapy. Section VI, Relations of the house officer. Appendix The treatment of wounds. Index

Note (1906) In this book hospital procedures and techniques employed at the Cleveland Clinic are described primarily for internes in its surgical service. Many of the techniques described are in constant use in hospitals in the U.S.A. on the other hand, some of them have been developed at the sponsoring hospital and are not yet widely used. The material on these newer procedures is of interest to practicing surgeons generally. Pre- and postoperative techniques which are the responsibility of interns are described explicitly; there is some background physiological and pharmacological material. In the present edition the work has been greatly enlarged. The newly added material relates to such topics as chemotherapy pressure dressings for wounds, and new techniques in the preparation of patients for operation

ELMAN ROBERT

Parenteral alimentation in surgery with special reference to proteins and amino acids. New York Paul B Hoeber Inc. Medical Book Department of Harper & Brothers 1948 270 p illus. 24 cm. $5 00 1178

Contents Introduction. General indications and methods for the parenteral administration of fluids. Water and electrolyte needs. Energy (caloric) needs. Vitamin needs. Protein needs. Clinical manifestations of protein deficiency. Methods of parenteral protein administration—plasma transfusions. Methods of parenteral protein administration—amino acids and hydrolyzed protein. A practical program for parenteral alimentation. Clinical results with parenteral alimentation. Appendix—Milestones in parenteral alimentation. Index.

Note In this monograph a surgeon who has made notable contributions to the development of the knowledge and techniques of parenteral alimentation presents the current knowledge of the subject. The work is based on a comprehensive literature survey and the chapters are supplemented by lengthy bibliographies. The physiological bases for the technique are discussed; data are presented on the needs of children and adults for water and the other basic food elements; and the administration of these substances by intravenous or subcutaneous injection is thoroughly covered. In this revision of the first edition errors found in the first printing were corrected. Additions were made to the bibliographies and there are a number of significant changes in the text proper.

FOOT NATHAN CHANDLER

Pathology in surgery 368 illustrations in black and white and 20 subjects in full color on ten plates. Philadelphia J B Lippincott Company 1945 511 p illus (part col d) 26 cm. $10 00 1179

Contents Field, procedures, and technics of surgical pathology. Inflammation. Healing of surgical wounds. General remarks on tumors. Fibrous connective tissue. Cartilage and bone. Muscular and adipose tissue. Serous membranes. Cardiovascular system. Bone marrow. Lymph nodes and spleen. Respiratory system and mediastinum. Alimentary tract. Liver gallbladder and pancreas. Urinary system. Organs of internal secretion. Male reproductive system. Female reproductive system. Breast. Nervous system. Skin. Index.

Note: This work is not a comprehensive treatise on pathology but is limited to the pathology of organs and tissues which are significant in the diagnosis of conditions for which surgery is often indicated. It deals with the pathology of tissues removed in biopsy for diagnostic purposes and with the pathology of organs which may be removed in remedial surgery. It has been developed from materials used by the author in teaching a third-year course in surgical pathology at the Cornell University Medical College. It is intended for medical students of this rank and also for surgeons and surgical pathologists in hospitals. Within this scope it provides a thorough and detailed impression of disorders of organs and tissues with emphasis on differential diagnosis. Etiology congenital anomalies, and the healing of surgical wounds are also discussed. The greater part of the illustrations are reproductions of microphotographs. Each chapter is accompanied by an excellent selected bibliography

FRANTZ VIRGINIA KNEELAND AND HAROLD DORTIC HARVEY

Introduction to surgery New York Oxford University Press 1946 216 p illus. 19 cm. $2.50 1180

Contents (abridged) History Injury and inflammation. Degeneration, hypertrophy atrophy regeneration. Deformities. Cysts. Neoplasms. Contusions. Abrasions. Incised wounds. Wounds with loss of substance. Repair of accessory skin structures. Repair of mucous membrane. Repair of muscle. Repair of hollow and solid viscera. Repair of nervous system. Repair of cartilage. Repair of bone. Calcification. Infection. Infection in serous and synovial cavities. Infection in bone. Drainage. Operative wounds. Accidental wounds. Ulcers. Burns. Gangrene. Hemorrhage. Shock. Contact with the patient. Surgical technique. Anesthesia. Plastic surgery. Experimental surgery. Bibliography. Index.

Note. A lucid and useful presentation of information about the injury inflammation, surgical repair and natural healing of tissues. It is intended for student surgeons, but it contains background knowledge rather than detailed descriptions of surgical techniques. It is based on material developed over a long period of years in the introductory course in surgery offered at the College of Physicians and Surgeons of Columbia University

HERBUT, PETER A

Surgical pathology 410 illustrations Philadelphia Lea & Febiger, 1948. 710 p. illus. 24 cm. $12 00 1181

Contents Skin and subcutaneous tissue. Breast. Nose and sinuses. Larynx. Trachea, bronchi and lungs Neck. Mediastinum. Mouth, pharynx and salivary glands Esophagus. Stomach. Small intestine. Appendix. Large intestine and anus. Peritoneum and retroperitoneum. Liver biliary system and pancreas. Lymphatic system and spleen. Urinary system. Male genital system. Female genital system. Bones. Joints, tendons, bursae and skeletal muscles. Index.

Note A clearly-written discussion of a broad group of conditions, emphasizing gross and microscopic pathology but including also definition, embryology anatomy etiology diagnosis, treatment, and associated diseases. The book is suitable for two types of uses (1) as a medical college textbook and (2) as a reference manual for surgical pathologists and surgeons. The material presented under each heading has been rigidly selected and is compactly presented then there are extensive lists of references to related material for use when a particular subject must be pursued further A considerable proportion of the numerous illustrations is reproductions of photomicrographs. The author is Professor of Pathology at Jefferson Medical College.

HOMANS JOHN

A textbook of surgery compiled from lectures and other writings of members of the Surgical Department of the Harvard Medical School. With a special bibliographical index and with illustrations by Willard C. Shepard and others. Sixth edition. Springfield, Illinois Charles C Thomas, 1948 1278 p illus 25 cm. $9 00 1182

Contents (abridged) Repair Surgical bacteriology Surgical technic. Suppurative inflammation. Ulcer gangrene and their causes. Trauma. Tuberculosis. Syphilis. Tumors and cysts. The blood vessels. The lymphatics. The peripheral and cranial nerves. The sympathetic and parasympathetic nervous systems. The joints. The bursae. The muscles and tendons Diseases of bone. Fractures. Injuries in the region of the shoulder girdle, shoulder and arm. Injuries of the elbow and forearm Injuries of the pelvis, hip and femoral shaft. Injuries in the region of the knee and leg. The cranium and meninges. The brain The mouth, tongue and jaws The eye. The ear The neck. The vertebral column The thoracic wall, pleurae and lungs. The heart, pericardium and mediastinum. The stomach and duodenum. The liver gall bladder biliary passages and pancreas. The spleen. The peritoneal cavity The intestines. Hernia and the abdominal wall Gynecology Genito-urinary diseases Anesthesia. Amputations and plastics Bibliographical index. Subject index.

Note (1948) An inclusive work which has won exceptional recognition as a textbook and work of reference. Its purpose is to teach the fundamentals and [illegible] of the practice of surgery Typical chapters deal with the anatomy physiology diseases, pathological features, diagnosis, and surgical treatments of specific organs or region of the body A valuable feature is the historical sketch at the beginning of each chapter or division in which [illegible] the development of our present knowledge of the anatomy physiology etc of the part under discussion, and of the methods employed in treating its diseases. The source publications for these sketches are included in the very extensive bibliographical index. In this edition the work is very little longer than in the fifth edition but a considerable amount of fresh matter has been inserted by excluding older material. The publisher claims that new and revised matter runs to a total of 144 pages.

ILGENFRITZ, HUGH CALVIN

Preoperative and postoperative care of surgical patients With a foreword by Urban Maes. St. Louis The C V Mosby Company 1948 898 p. illus. 22 cm. $10.00 1183

Contents General [illegible]. Fluid and electrolyte balance. Metabolism and nutrition. Sedative medication. [illegible] preoperative treatment. General postoperative measures. Shock. Transfusion. Systemic complicating factors. Organic diseases. Chemotherapeutic and antibiotic drugs. Minor postoperative complications. Major postoperative complications. Intestinal obstruction and peritonitis. Care of the wound. Burns. Thoracic surgery. Stomach, small intestine and appendix. Large bowel. Biliary tract. Thyroid. Extremity. Gynecologic surgery. Appendix. Index.

Note: An exceptionally comprehensive manual. Not only are the relevant techniques all described, but their physiological, pharmacological, bacteriological or nutritional bases are also explained. The author's aim is to facilitate the forming of a uniform plan for the care of each surgical patient, including his pre- and postoperative care. The descriptions of techniques are detailed background material is presented more compactly. The book is useful to students preparing for surgery internes and other hospital staff officers, and practicing surgeons. The material includes such recent developments as the Rh factor in relation to blood transfusions, the use of streptomycin, and the use of gelatin sponge, and oxidized cellulose. The selected reference lists at the ends of chapters cover, for the most part, recent literature.

LEITHAUSER, DANIEL JAMES

Early ambulation and related procedures in surgical management. Springfield, Ill. Charles C Thomas 1946 232 p. illus 23 cm. $5 00 1184

Contents: Introduction. History of early ambulation. General physiologic principles relating to early ambulation after surgery. Prevention of pulmonary complications. Prevention of complications related to the circulation. Prevention of gastro-intestinal complications. Prevention of wound complications. Prevention of dehydration and nutritional disturbances Psychological factors. Preoperative care. Surgical technic. Postoperative management. Surgical [illegible] care of ambulatory patients. Clinical results of early ambulation after surgery with case reports and follow-up. Economic factors. Index.

Note: This volume presents the case for a method of surgical management which the author has found most successful in preventing postoperative complications. It discusses the reasons for and desirability of early ambulation, and describes the special surgical techniques and postoperative care which must be followed for a variety of operations Also included is a review of the results obtained in 2047 surgical cases, many of which are presented in the form of case histories. References are given at the end of each chapter

MASON ROBERT LEONARD, AND HAROLD A ZINTEL editors

Preoperative and postoperative treatment. Second edition illustrated. Philadelphia W B Saunders Company 1946 584 p illus. 24 cm. $9 00 1185

Contents (abridged) Part 1, General: Conditions affecting the operative risk, by J Smith. The surgical risk and management of patients with heart disease, by L. R. Ellis. The surgical risk and management of patients with hypertension and nephritis, by L. R. Ellis. Anesthesia, by [illegible] C. Wiggin. Shock, by R. H. Aldrich. Water balance. Blood transfusion Disruption of the abdominal wound. Postoperative pulmonary complications, by D. S. King. Postoperative complications of the urinary tract, by G. C. Prather Venous thrombosis, by R. R. Linton Physical medicine in surgical practice, by A. L. Watkins. Part II, Regional Pre- and postoperative care in diseases of the ear nose and throat, by L. Richards. Pre- and postoperative care of the patient with hyperthyroidism. Pre- and postoperative treatment in surgery of the stomach and duodenum. Appendicitis, peritonitis. Acute obstruction of the small intestine, by L. S. McKittrick. Pre- and postoperative treatment in gynecology, by L. E. Phaneuf. Pre- and postoperative treatment in surgery of the colon and rectum, by E. P. Hayden. Traumatic injuries, by O. K. Cosgrave and R. L. Mason. Appendix, by [illegible] Bradley Index.

Note The thirty-three chapters in this book, most of which are papers written especially for it by outstanding specialists, cover a variety of special topics which are related to successful surgery The book is intended for surgeons and for hospital officers. Many changes have been made in the work in this edition. Several new authors are represented, and there are new chapters on physical medicine, pre- and postoperative care in gynecology in surgery of the stomach and duodenum, intestinal obstruction, etc. Many of the original chapters which have been retained have been rewritten. Altogether these changes have increased the length of the book by about 100 pages. Rather long bibliographies accompany the various chapters. There are now 134 illustrations.

MELENEY FRANK LAMONT

Treatise on surgical infections. New York Oxford University Press, 1948. 713 p illus.

(part col'd) 24 cm. (Oxford medical publications) $12.00 1186

Contents (abridged) Foreword, by Hans Zinsser Introduction, by Allen O. Whipple. Surgical infections and their classifications. Sterilization. Antisepsis and disinfection in relation to surgical infections, by Edwin J. Pulaski. Infection in clean operative wounds. Infection in accidental wounds. The organization of an adequate bacteriological service for surgical department. The bacteria that produce surgical infectious diseases, by B. A. Johnson. Methods for bacterial cultivation, by B. A. Johnson. Bacterial entrance into the human body. Bacterial spread through the human body. The defense of the human body against bacterial infection. The mechanism of the secondary defenses of the body. Surgical principles in the treatment of infection. Chemotherapy in surgical infections. The bacteriophage therapy of surgical infections. Antibiotic therapy in surgical infections. Index.

Note. A comprehensive treatment designed for hospital operating room supervisors, hospital bacteriologists, and practicing surgeons. The author is recognized as an outstanding authority on the subject; and he has incorporated in this work the results of studies carried out by him and his colleagues during period of twenty years. The work is well organized and clearly written. The text is supplemented by numerous illustrations and extensive bibliographies.

MOORHEAD, JOHN J

Clinical traumatic surgery 500 illustrations. Philadelphia W B Saunders Company 1945 747 p. illus. 25 cm. $12 00. 1187

Contents (abridged) Injuries in general. Shock. Injuries due to burns, temperature changes, irradiation and electricity. Wounds. Wounds and infections of the hand. Injuries of the head. Injuries of the chest. Injuries of the abdomen. Back injuries. Joint injuries. Deformities of the hands and feet. Dislocations. Fractures. Manipulative treatment in trauma. Traumatic periostitis and osteomyelitis. Amputations. Injuries to nerves, blood vessels and lymph vessels. Injuries due to compressed air, submersion, suffocation and inhalation. Relation of trauma to appendicitis, abortion and visceral displacement. Traumatic neuroses. Medicolegal phases of trauma. Malpractice suits. War injuries. Index.

Note: A thorough presentation of information on the diagnosis of the effects of accidental injuries and on surgical methods of treating such injuries. It has been developed from material used by the author in teaching courses in traumatic surgery at the New York Postgraduate Medical School; but the selection of the material and its treatment is based chiefly on the author's extensive experience with accidental injuries in his position as Medical Director of the New York City Transit System. The chapter on war injuries is based on his experiences in military surgery in both World War and World War. The book is designed for general practitioners who are so located that they must treat range of accident cases and for surgeons in industrial establishments or in large communities who specialize in traumatic surgery. The illustrations depict numerous details of diagnosis, surgery and postoperative care. There is no bibliography.

SPIVACK, JULIUS LEO editor

Urgent surgery Volume I. 244 figures having 572 illustrations (14 illustrations in color) Springfield, Ill. Charles C Thomas, 1946 714 p. illus (part col d) 25 cm. $11.50 1188

Contents: Intravenous infusion—blood transfusion, by J. L. Spivack. Shock—hemorrhage—septicemia—gas gangrene, by G. de Takats. Anesthesia in urgent surgery by A. M. Dogliotti. Electrosurgery by G. M. Black. Laparotomy; Urgent surgery of the stomach and duodenum; Congenital pyloric stenosis; Gastrostomy by J. L. Spivack. The pancreas, by W. H. Cole. Urgent surgery of liver and bile ducts, by B. G. Pedersen. Urgent surgery of the spleen; Appendicitis, by J. L. Spivack. Intestinal obstruction, by J. R. Paine. Urgent intestinal surgery in infants; Occlusion of the mesenteric vessels; Urgent surgery of the colon by J. L. Spivack. Perforative peritonitis, by E. Rimer. Non-perforative peritonitis, by J. L. Spivack. Name index. Subject index.

Note Not long ago emergency surgery which is usually carried out by general practitioners and non-specialists, covered chiefly accident cases. Modern diagnostic methods, and the greater accessibility of hospitals and specialists, have made emergency treatment of such conditions as ruptured appendix and intestinal obstruction possible also. This work, which deals with conditions in which immediate operations may be of extreme importance, reflects this change. Historical material, etiology incidence, pathology laboratory conditions, diagnostic considerations, including differential diagnosis, precede in each paper the discussion of actual surgery. Usually number of different operations are described and evaluated for given condition. In some, as in bleeding ulcers, non-surgical treatment is also summarized. It is taken for granted that technical details of routine surgery are part of the reader's equipment, but some procedures are included which are not always used purely for urgent cases. The illustrations, of fair quality add much to the clarity of the highly condensed text. Each section is followed by rather full bibliography.

WALTER, CARL W

The aseptic treatment of wounds. Illustrated by Mildred B Codding. New York The Macmillan Company 1948 372 p illus. 29 cm. $9 00 1189

Contents The importance of the aseptic treatment of wounds. The development of the concept of asepsis. Chemical destruction of bacteria. Chemical disinfection of instruments. Physical destruction of bacteria. Sterilization by boiling water. Sterilization by steam. The control of steam sterilization. Sterilization by dry heat. Sterilization of dressings and dry goods. Care and sterilization of instruments. Disinfection of the skin. Air-borne contamination. Operating room technic. Terminal sterilization of instruments and bedding from septic cases. Preparation of parenteral fluids. Blood and plasma transfusion. Central supply room technic. Hospital infection of wounds. Control of communicable disease. Maintenance of sterilizing equipment. Index.

Note: A practical and detailed exposition of the principles of asepsis and of the techniques of sterilization, disinfection, etc. which contribute to asepsis in surgical and hospital procedures. Concrete information on the effectiveness of various methods is given. Good techniques are illustrated step by step. There are 213 figures, many of which contain reproductions of six or more drawings. Pertinent literature is cited in footnotes. The work is addressed particularly to surgeons and nurses, but it contains much material of interest also to hospital administrators and to manufacturers of hospital equipment and supplies.

YEAR BOOK OF GENERAL SURGERY

The 1948 Year book of general surgery edited by Evarts A. Graham. Chicago The Year Book Publishers, Inc., 1949 717 p illus. 19 cm. (The practical medicine year books) $4.50 1190

Contents: Anesthesia and analgesia. Surgical instruments and appliances. Wounds, wound infections and wound healing. Antibacterials in surgery. Shock—circulating volume. Metabolism—electrolytes. Neoplasms. The nervous system. Face and buccal cavity. Neck. Breast. Thorax. Circulatory system. Stomach and duodenum. Small intestine. Vermiform appendix. Colon—rectum—anus. Liver. Biliary duct system. Pancreas. Spleen. Hernia. Abdomen—peritoneum. Trunk. Bones and joints. Upper extremity. Lower extremity. Index. Index to authors.

Note. (1948) This annual publication is edited and organized similarly to other volumes in the same useful series. Significant articles are selected from the medical literature of the world and are reduced to abstracts which run around 800 words in length. These abstracts are classified under the various headings given in the contents above. A reference to the original source is given in the form of footnote, and occasionally the abstract supplemented by an explanatory note written by the editor. There is generous number of illustrations—190 in the present issue.

ANESTHESIA

ADRIANI JOHN

The chemistry of anesthesia. Springfield Ill. Charles C Thomas, 1946 536 p illus. 23 cm. $8.50 1191

Contents: Inorganic chemistry related to anesthesia. The physical behavior of gases. Clinical applications of the physical laws of gases. The chemistry of inorganic gases. The chemical absorption of carbon dioxide in rebreathing appliances. Organic chemistry related to anesthesia. The chemical nature of anesthetic drugs. Hydrocarbons. Alcohols. Aldehydes and ketones. Acids, acyl derivatives, and esters. Ethers, alkene oxides, and acetals. Halogenated compounds. Sulphur-containing substances—sulphonmethanes. Aromatic and heterocyclic compounds. Opium and opium alkaloids. Amides, ureides, and related compounds—barbiturates. Local anesthetic drugs. Drugs affect

ing the autonomic nervous system. Stimulating drugs used as analeptics. Standards of purity of drugs. Inflammability of anesthetic mixtures. Biochemistry related to anesthesia. Chemical basis of proposed mechanisms of narcosis. Effects of anesthesia upon composition of body fluids. The effects of anesthesia on liver function. Effects of anesthesia upon formation and composition of urine. Effects of anesthetic drugs on blood and nervous tissues. Enzymes, vitamins and hormones. Metabolism during anesthesia. Detoxification and elimination of anesthetic drugs. Toxicology. Biochemical aspects of local anesthesia. Bibliography. Glossary. Appendix. Index.

Note. A basic work for practicing anesthesiologists and for postgraduate medical students who are preparing for this specialty. As the title indicates, it deals, not with the uses and administration of anesthetic drugs, but with their chemistry, chemical and pharmacological descriptions, and the chemical effects in the body. Its purpose is to enable the practitioner to understand the drugs he uses and perhaps to stimulate him to undertake fundamental research. Extensive literature references are provided for each of the chapters.

ADRIANI, JOHN

Techniques and procedures of anesthesia. Springfield, Ill. Charles C Thomas 1947 404 p. illus. 26 cm. $7.00 1192

Contents (abridged). Part I, General considerations. Part II, Inhalation anesthesia. Type and methods. Techniques of inhalation anesthesia. Artificial airways. Complications during anesthesia. Circulatory complications. Neurological complications. Technical complications. Care of patient at termination of anesthesia. Part III, Anesthesia by intravascular injection. Part IV, Rectal anesthesia. Part V, Regional anesthesia. General considerations of regional anesthesia. Spinal anesthesia. Epidural anesthesia. Paravertebral block anesthesia. Nerve blocks. Field blocks. Part VI, Resuscitation. Part VII, Inhalation therapy: Oxygen therapy. Carbon dioxide-oxygen therapy. Helium-oxygen therapy. Appendix. Index.

Note. A thorough manual of the details of administering anesthetics. The information given on the treatment of specific types of anesthesia covers such matters as definition of the type, synonyms, uses, drugs employed, materials required, premedication, preparation and position of patient, site, procedure, factors influencing duration, advantages and disadvantages, complications and their treatment, contraindications, miscellaneous comments, and references to related literature. Procedures and some other classifications are stated in step-by-step form. The book is suitable as a textbook for medical students and as a reference book for general practitioners.

CULLEN, STUART CHESTER

Anesthesia in general practice. Second edition. Chicago The Year Book Publishers, Inc. 1948 264 p illus. 21 cm. $3.50 1193

Contents: Preanesthetic medication. Airway. Inhalation anesthesia—agents. Inhalation anesthesia—technics. Spinal analgesia. Regional, infiltration and topical analgesia. Types of anesthesia. Choice of anesthetic agent and technic. Recognition and treatment of shock. Oxygen therapy. Pre- and postanesthetic care of the patient. Explosion hazards. Appendix: Anesthetic agents available for office use. Index.

Note. A compact manual which emphasizes the practical aspects rather than the theory of anesthesia. The various anesthetic agents are described as to effects, uses, and hazards. Good techniques of administration are described, and considerable space is given to treatment of shock and other undesirable effects. The author is an outstanding specialist in anesthesiology but this book is addressed to general practitioners and part-time anesthetists rather than to specialists. In this edition material has been added on new anesthetic agents and on curare.

GILLESPIE, NOEL ALEXANDER

Endotracheal anaesthesia. Second edition, revised and enlarged. Madison Wis. The University of Wisconsin Press 1948 237 p. illus. (part col'd) 21 cm. $4.50. 1194

Contents: Introduction. The history of endotracheal anaesthesia. Advantages and disadvantages of endotracheal anaesthesia. Insufflation endotracheal anaesthesia. Equipment and apparatus for intubation. Intubation. Miscellaneous technical considerations during maintenance. Sequelae of endotracheal anaesthesia and their influence on the choice of route. The practical applications of endotracheal anaesthesia. The uses of intubation for purposes other than anaesthesia. Bibliography. Index.

Note (1413) Essentially a practical guide to the techniques of endotracheal anesthesia, this work also covers succinctly the history of the subject and provides a key to the literature. Most of the space is given to explicit descriptions of the ways in which the technique is applied under various conditions and in various operations. This edition is larger by about 50 pages than the preceding one. The newly added material relates to thoracic operations, bronchial intubation, and numerous other developments reported since 1941.

KEMP, W. N.

Elementary anesthesia. Baltimore The Williams & Wilkins Co., 1948 289 p. illus. 23 cm. $5.00 1195

Contents (abridged). General historical résumé. Physiological considerations of importance in anesthesia. Pharmacodynamic considerations in anesthesia. Preanesthetic medication and preoperative care. Inhalation anesthesia. Endotracheal anesthesia. Anesthesia and analgesia by intravenous administration. Oral, subcutaneous and rectal anesthesia. Anesthetic combinations. Anesthesia in childhood. Analgesia and anesthesia in obstetrics. Anesthesia for thoracic surgery. Complications of general anesthesia and their treatment. Spinal anesthesia. Procedures of common application for local anesthesia. Status lymphaticus or thymic syndrome. Anesthesia for non-surgical conditions. Index.

Note. A compact manual of the more common practices in the administration of general or regional anesthesia. The book is eminently practical and is written to supplement the instruction received by the medical student and to serve as a guide for the general practitioner rather than the specialist. It discusses the types of anesthesia to be used in a wide variety of operations, and describes in adequate detail the common techniques of administering the various drugs now in general use. Apparatus and equipment manufactured in Great Britain and the United States are also described.

KEYS, THOMAS EDWARD

The history of surgical anesthesia with an introductory essay by Chauncey D Leake and a concluding chapter The future of anaesthesia, by Noel A. Gillespie. New York. Schuman's 1945 191 p illus. 24 cm. $6.00 1196

Contents: Introductory essay by Chauncey D. Leake. The development of anesthesia. A chronology of events relating to anesthesiology and allied subjects. Selected references by subject. Selected references by author. The future of anaesthesia, by N. A. Gillespie. Appendix: The Morton and Warren tracts on ether (letheon) by John F. Fulton. Index.

Note. A scholarly and well-written account of the development of anesthesia from man's first attempts to relieve pain up to the present time. The author has not attempted to dramatize his subject, but the book will appeal to both the layman interested in medical history and to persons in medicine and allied professions. Of particular interest to the latter groups are the carefully documented accounts of early experiments and the extensive bibliography arranged both by subject and author. The volume contains excellent portraits of men who have done outstanding work in the field of anesthesia.

PITKIN, GEORGE PHILO

Conduction anesthesia—clinical studies edited by James L. Southworth and Robert A. Hingson. 606 illustrations. Philadelphia J B Lippincott Company 1946. 981 p. illus. 26 cm. $20.00. 1197

Contents (abridged). Anatomy of cranial nerves, by W. M. Pitkin. Anatomy of the spinal nerves, by W. M. Pitkin. Autonomic nervous system, by W. M. Pitkin. Pharmacology and toxicology of cocaine and synthetic local anesthetics, by A. R. McIntyre. Shock. Traumatic and surgical shock, by F. M. Allen. Shock as related to anesthesia, by R. A. Hingson. Principles of conduction anesthesia. Blocking the trigeminal nerve. Cervical block. Brachial-plexus block. Intercostal block. Segmental block for visceral surgery. Conduction anesthesia of the extremities. Local anesthesia. Paraforal block and continuous caudal analgesia, by R. A. Hingson and J. L. Southworth. Spinal anesthesia, by L. A. Palmer. Continuous spinal anesthesia, by W. T. Lemmon and H. G. Hager Jr. Refrigeration anesthesia. Theoretic and experimental basis, by F. M. Allen. Clinical methods, by L. W. Crossman and F. M. Allen. Therapeutic nerve block, by J. L. Southworth. Index.

Note: A comprehensive presentation of all anesthetic methods which may be used to interrupt nerve conduction without disturbing consciousness or interfering with metabolism. The entire work was planned by Dr George P Pitkin before his death and the chapters to which other authors' names are not given in the above contents were written by him before his death. The anatomy of the nervous system is presented in great detail both in the preliminary general chapter and in the chapters on specific operations. Anesthetic techniques are adequately described. The illustrations, which were prepared under the direction of Dr Pitkin, are exceptional both in scope and in rendering of details. Each chapter is accompanied by bibliography of the related literature.

RAPER, HOWARD RILEY

Man against pain the epic of anesthesia. New York Prentice-Hall Inc., 1945 337 p. illus. 24 cm. $3 75 1198

Contents (abridged) Part I, Background Early narcotics. Hypnotism. With club. Early surgery Part II, Discovery: Those who came close. The discovery Born. Triumph. Part III, Controversy: Trouble. Tragedy Congressional warfare. Jackson and Long. Horace Wells. William T G. Morton. Part IV Modern anesthesia: Hope. Achievement. Further achievement. The decaled dog. With needle. Cafeteria style. Twilight sleep. Streamlined anesthesia. Pain fighters. Bibliographical appendix: Critical bibliography General bibliography Index.

Note: A dramatic narrative of the personalities associated with the introduction of inhalation anesthesia in the 1840's, and of the century-old controversy about who should have credit for the discovery—Wells, Morton, Jackson or Long. The author has made an extensive investigation of the literature and source material on the conflict of claims and offers twenty-four items for critical review His evaluation of the evidence—and this is the core of the study—is an engrossing analysis of the character opinions, and behavior of each of the claimants. Earlier attempts to find narcotics are briefly sketched as background for the account, and concluding chapters summarize the developments in anesthesia to the present day Although based on scholarly research, the account is presented in popular writing, enlivened with humor.

ROBINSON VICTOR

Victory over pain a history of anesthesia. New York Henry Schuman 1946 338 p illus. 22 cm. $3.50 1199

Contents (abridged) Early developments: Control of pain in antiquity Anodynes in the Orient. Narcotics in the Middle Ages. The seventeenth and eighteenth centuries. On the threshold: Humphry Davy Henry Hill Hickman. Mesmerism in anesthesia. The discovery: Crawford Williamson Long Horace Wells Charles Thomas Jackson. William Thomas Green Morton. The controversy. The reception of the discovery in Europe: Robert Liston. Central Europe. France. Nicolai Ivanovich Pirogoff. Chloroform. The beginnings of local anesthesia From rag and bottle: Twilight sleep. Continuous caudal analgesia. Endotracheal anesthesia. Rectal anesthesia. Intravenous anesthesia. Spinal anesthesia. Refrigeration anesthesia. Three twentieth century anesthetics. Curare. Selected and annotated bibliography Index of subjects and individuals.

Note A popular account. The author has drawn freely from contemporary accounts of the first experiments and has added "human interest" by including anecdotes about the struggles and experiences of the early workers in the field. The book is easy to read and reliable as to facts.

YALE UNIVERSITY SCHOOL OF MEDICINE. YALE MEDICAL LIBRARY

The centennial of surgical anesthesia, an annotated catalogue of books and pamphlets bearing on the early history of surgical anesthesia compiled by John F Fulton and Madeline E. Stanton. New York Henry Schuman 1946 102 p. illus. 23 cm. (Yale Medical Library Historical Library Publication no 15) $4.00 1200

Contents: Forerunners of surgical anesthesia. Crawford Williamson Long. Horace Wells and nitrous oxide. William T. G. Morton, Henry J. Bigelow & Edward Warren. Charles Jackson. Sir James Y Simpson and chloroform. Other studies on individual surgical anesthetics (to 1875) Early general monographs on surgical anesthesia. Regional and block anesthesia. Studies on individual anesthetics (after 1875) Anesthesia and psychiatry History and bibliography of surgical anesthesia. Addendum. Index.

Note: The books, pamphlets, leaflets, and patents listed in this exhibition catalogue are given full bibliographical descriptions, and these are supplemented by notes that tell something about the history of the pieces. Locations of copies in American libraries are given. Editorial paragraphs at the heads of chapters and interspersed among the bibliographical material summarize steps in the discovery and acceptance of anesthetics and describe the fortunes and misfortunes of the various men who are associated with the developments. The bibliographies of regional and block anesthesia and of studies on individual anesthetics, mentioned in the contents, are not in this book, but will appear in scheduled Part of the Catalogue.

FRACTURES

COMPERE EDWARD LYON AND SAM W BANKS

Pictorial handbook of fracture treatment. Revised with the assistance of Clinton L. Compere. Illustrated by Harold Laufman. Second edition, revised. Chicago The Year Book Publishers, Inc., 1947 390 p. illus 21 cm. $5,50 1201

Contents (abridged) Part one, General considerations of treatment of fractures and dislocations: Fracture pathology Fracture healing. The diagnosis of fracture. Emergency treatment of fractures. Anesthesia. Reduction of fractures. Immobilization of fractures. Rate of healing of fractures. After-treatment of fractures. Delayed union and nonunion. Complications of fractures. Aseptic necrosis of bone. Pathologic fractures. Birth fractures. Part two Fractures and dislocations of the upper extremity scapula and clavicle. Part three. Fractures and dislocations of the lower limbs. Part four: Fractures and dislocations of the trunk. Part five The face and skull. Index.

Note. (1419) A concise reference book for the general medical practitioner Surgical rehabilitation is stressed, and only those methods of fracture management which have been proved successful in the authors' own experience are described. Only slight reference is made to the wide assortment of gadgets and automatic reducing devices available because they are not generally available to the local physician. In the present revision, several chapters have been completely rewritten, and editorial changes have been made throughout the text. Likewise, some of the illustrations have been deleted and replaced, and 19 new illustrations have been added.

EVE, DUNCAN JR.

Handbook on fractures in collaboration with Trimble Sharber St. Louis The C. V Mosby Company 1947 263 p illus. 25 cm. $5 00 1202

Contents (abridged) Immobilization methods. Open reduction and internal fixation. Compound fractures. Fractures of the ribs and sternum. Fractures of the clavicle and scapula. Fractures of the humerus. Fractures of the elbow Fractures of the forearm. Fractures of the wrist and hand Fractures of the spine. Fractures of the pelvis. Fractures of the shaft of the femur Fractures of the patella. Fractures of the bones of the leg. Fractures of the bones of the feet. Fractures of the bones of the face. Index.

Note. In this manual emphasis is placed on the actual methods and techniques utilized in reducing and treating wide variety of fractures, both mechanically and by means of surgical measures. The discussions of causes, signs, and symptoms are limited to the barest essentials. The method of approach is eminently practical, and the techniques described are those which the author has found most successful during forty years of work in this special field. Numerous reproductions of X-ray films supplement the textual material.

GECKELER, EDWIN OSCAR

Fractures and dislocations for practitioners. Fourth edition. Baltimore The Williams & Wilkins Company 1948 371 p. illus. 23 cm. $5 00 1203

Contents (abridged) Part One, Fractures: Emergency treatment. Fracture wounds. Reduction. Immobilization. Traction. Follow-up

treatment. Bones of the skull and face. Vertebrae. Pelvic bones. Clavicle and scapula. Forearm bones. Bones of wrist and hand. Bones of leg. Bones of ankle. Bones of foot. Part Two, Dislocations Temporomandibular joint. Spinal and sacroiliac joints. Shoulder joint. Elbow joint. Wrist and hand. Hip joint. Knee joint. Index.

Note: (2620) A standard manual designed not for the specialist but for the advanced student and the general practitioner. Instead of covering the subject comprehensively the author has elected to select one method of treatment for each type of fracture and to describe this in adequate detail for practical use. Bibliographies at the ends of the chapters refer to fuller discussions and to other methods. There is considerable emphasis on plaster-of-paris techniques as universally popular form of immobilization. The changes in the text of this edition are relatively minor but many new illustrations have been added.

GECKELER, EDWIN OSCAR

Plaster of paris technic. Second edition. Baltimore The Williams & Wilkins Company 1948 220 p illus. 23 cm $3.00 1204

Contents (abridged) Forms of plaster of paris used in surgery General technic (bandage method) Application of plaster of paris (bandage method) Spine. Shoulder and upper limb. Pelvis and lower limb. Plaster of paris in war surgery. Plaster for injury and inflammation of soft tissues—the use of plaster of paris for burns. References. Index.

Note (2451) A practical manual which deals thoroughly with the construction, care, and removal of plaster-of-paris casts. It contains nothing on other orthopedic techniques. In the present edition the changes in the text are relatively minor but the legends under the illustrations have been rewritten in many instances, and about twenty illustrations have been added which did not appear in the previous edition. There are now 216 illustrations, and most of them are reproduced from photographs which show details of techniques or show completed casts.

KEY JOHN ALBERT, AND H. EARLE CONWELL

The management of fractures dislocations and sprains Fourth edition. St. Louis The C. V Mosby Company 1946 1322 p illus. 26 cm. $15 00 1205

Content (abridged) Part I, Principles and general aspects: Repair of fractures. First aid in fractures and automobile injuries Complications of fractures. Pathologic fractures. Compound fractures and war wounds Dislocations. The workmen's compensation law affecting fracture cases. Medicolegal aspects of fracture cases Part II, Diagnosis and treatment of specific injuries: Fractures of the skull and brain trauma, by E. F Fincher Fractures of the jaws and related bones of the face, by J. B Brown. Injuries of the spine. Fractures and dislocations of the hyoid, larynx, and tracheal cartilages. Injuries of the thorax. Injuries in the region of the shoulder girdle and shoulder Fractures of the shaft of the humerus. Fractures in the region of the elbow Injuries in the region of the wrist and hand. Fractures and dislocations of the pelvis. Injuries in the region of the hip Fractures of the shaft of the femur Injuries of the region of the knee joint. Fractures of the shafts of the tibia and fibula. Injuries in the region of the ankle. Injuries of the foot. Index.

Note (2621) A comprehensive treatment of this branch of surgery It is established as practical guide for medical students and for surgeons and general practitioners in medicine. It covers not only injuries to bones, but injuries to the soft tissues which often accompany fractures. In spite of the book's inclusiveness, there is no attempt to cover all recorded procedures. Instead, the authors have selected the procedures which they have come to consider the best, as based on their own experience. The procedures included are discussed very thoroughly and are illustrated by more than 1200 reproductions of diagrams, photographs, and roentgenograms In the present edition, the material on the spine, the hip, and on compound fractures has been revised somewhat. Some of the material which the authors now consider obsolete has been deleted Although the total number of illustrations has been increased by only approximately fift two hundred of these illustrations are newly added About one hundred fifty which appeared in the previous edition have been removed.

QUIGLEY THOMAS BARTLETT

Plaster of paris technique in the treatment of fractures and other injuries. New York The Macmillan Company 1945 107 p. illus. 24 cm. $4 00 1206

Contents. General considerations. The upper extremity The lower extremity The vertebral column. Index.

Note The preparation and uses of casts made with roller bandages impregnated with plaster of paris are discussed in this compact, practical manual. The author stresses the importance of watching for possible complications after the cast is applied, but no attempt is made to deal with the diagnosis, pathology or prognosis of the fracture. More than 100 photographs supplement the textual material.

STIMSON BARBARA BARTLETT

A manual of fractures and dislocations. Second edition thoroughly revised. Illustrated with 98 engravings. Philadelphia Lea & Febiger 1947 223 p. illus. 20 cm. $3.25 1207

Contents (abridged) Part I, General considerations Definition, classification and diagnosis of fractures. Symptoms and signs of fractures. Principles of treatment of fractures. Part II, The upper extremity Injuries to the shoulder girdle. Injuries at the shoulder-joint. Fractures of the shaft of the humerus. Injuries at the elbow-joint. Injuries to the forearm. Injuries at the wrist. Injuries to the hand. Part III, The trunk Percentage of occurrence. Injuries to the chest. Injuries to the spine. Injuries to the pelvic girdle. Part IV The lower extremity: Injuries at the hip-joint. Fractures of the shaft of the femur Injuries at the knee-joint. Fractures of the shafts of the tibia and fibula. Injuries at the ankle-joint. Injuries to the foot. Index.

Note. (2637) A compact, generalized manual which is designed chiefly for the information of general practitioners and other specialists in the field. The typical information given for specific fracture covers briefly the following points: occurrence, displacement, diagnosis, pathology treatment, period of immobilization, and prognosis. The textual material is supplemented by simple line drawings. The present edition is the result of numerous minor changes in the text of the first edition, most of which are the result of advances in fracture surgery during World War II.

VENABLE, CHARLES SCOTT, AND WALTER GOODLOE STUCK

The internal fixation of fractures with foreword by Ralph K. Ghormley Springfield, Ill. Charles C Thomas 1947 237 p. illus. 26 cm. $6.00 1208

Contents: Early uses of metal appliances. Investigation of metals in surgery Stainless steel. Vitallium. Other metals. The technique of internal fixation. Fractures of the upper extremity Fractures of the lower extremity Necessary improvements in appliances. Appendix. Index.

Note: A monograph designed primarily as reference book for fracture specialists There is an interesting historical survey The chapter on investigation of metals includes the authors' investigations on the electrolytic reactions of metals used for internal fixation and reports of clinical experiences of other surgeons during the same period. Vanadium is considered, has used alone, the most successful metal for these purposes. The chapter on technique classifies conditions in which closed or open reduction is demanded or preferred, and describes various metal splints, screws, plates which are useful under given conditions with the technique of their use and postoperative treatment. This basic material is then applied to specific fracture problems of the upper and lower extremities. Very full lists of references are given at the end of each chapter There are 81 illustrations, predominantly X-rays, showing fractures and fixation with metal appliances.

SURGERY OF SPECIAL REGIONS AND ORGANS

BANCROFT FREDERIC WOLCOTT, AND PRESTON A. WADE, editors

Surgical treatment of the abdomen. With 457 illustrations and 3 color plates. Philadelphia J B Lippincott Company 1947 1026 p illus. (part col d) 27 cm. $18.00 1209

Contents: Section One, Anesthesia: Preanesthetic medication, by D. E. Bruce. Inhalation anesthesia, by E. C. Wiggin. Rectal anesthesia, by P. M. Wood. Pentothal-sodium intravenous anesthesia, by R. C. Adams. Spinal anesthesia, by H. J. Shields. Regional anesthesia, by H. S. Ruth. Section Two, General principles: Preoperative and postoperative treatment, by A. Blalock and M. M. Ravitch. Blood transfusion, by J. Geiger. The fundamental principles of surgical technic, by J. M. Stevenson and M. R. Reid. Section Three, Surgery of the mouth and esophagus: Surgery of the mouth, by R. H. Kennedy. Surgery of the esophagus, by J. H. Garlock. Section Four, Surgery of the abdomen: Abdominal incisions, by F. B. Gurd. Treatment of peritonitis and peritoneal abscesses, by F. A. Coller and H. K. Ransom. The significance of gastroscopy for the surgeon, by R. Schindler. Surgical therapy in lesions of the stomach and duodenum, by R. R. Graham. Gastrojejunal ulcer, by D. B. Pfeiffer. Surgery of the small intestine, by A. W. Allen and C. E. Welch. Appendicitis: its surgical treatment, by A. Ochsner and D. W. Barrow. The colon and rectum, by F. W. Rankin and A. S. Graham. The anus, by H. E. Bacon and S. McLanahan. Surgery of the biliary tract, by A. O. Whipple. Surgery of diseases of the liver, by I. S. Ravdin. Diseases of the pancreas, by W. B. Parsons. Surgery of the spleen, by J. D. Rives and U. Maes. Physiologic aspects of postoperative care, by A. Ruder. Index.

Note: This volume provides, in a series of chapters written by outstanding authorities, expert and rather detailed discussions of modern techniques. It is designed both for students and practicing surgeons. The first edition was published as *Operative surgery*. New York: D. Appleton-Century Company, 1941. In this new edition under a new imprint, the work has been extensively reorganized and revised. Some of these rearrangements and revisions were carried out in order to fit it into the series of books on surgery which is edited by these authorities, but an essential part of it consisted in revising the original articles to bring them up to date. A considerable number of illustrations has been added.

BANCROFT FREDERIC WOLCOTT editor

Surgical treatment of the nervous system. Associate editor Cobb Pilcher 293 illustrations and 5 color plates. Philadelphia J B Lippincott Company 1946 534 p illus (part col'd) 26 cm. $18 00 1210

Contents: Section One, General principles of neurosurgical technic, by C. Pilcher. Surgery of infantile hydrocephalus, by T. J. Putnam. Craniocerebral trauma, by R. G. Spurling. Cranioplasty, by B. Woodhall. Brain abscess, by E. A. Kahn. Osteomyelitis of skull, by J. H. Maxwell. Section Two, Tumors of skull, by C. Pilcher. Tumors of meninges, by C. Pilcher. Tumors of cranial nerves, by W. McK. Craig and C. H. Shelden. Intrinsic tumors of cerebrum, by E. F. Fincher, Jr. Tumors of hypophyseal region, by W. McK. Craig. Intrinsic tumors of the cerebellum and brain stem, by P. C. Bucy. Vascular anomalies of brain, by C. Pilcher. Section Three, Surgery of disorders of cranial nerves, by M. M. Peet and D. H. Echols. Diseases characterized by involuntary movements, by T. J. Putnam. Epilepsy due to atrophic cerebral lesions, by T. C. Erickson. Section Four, Surgery of spinal cord, by H. C. Naffziger and E. B. Boldrey. Section Five, Surgical lesions of peripheral nerves, by C. C. Coleman. Section Six, Surgery of sympathetic nervous system, by J. C. White. Section Seven, Chemotherapy in neurosurgery, by C. Pilcher. Index.

Note: A presentation of the surgical experience and techniques of seventeen outstanding specialists in neurosurgery. Each of the chapters is an original paper prepared especially for this book. Although the papers were not written to a standardized editorial formula, each one, generally speaking, devotes some space to background material on etiology, diagnosis, etc., but is concerned chiefly with descriptions of techniques with which the author has had extensive experience. There are almost 300 illustrations, and the chapters are accompanied by selected bibliographies. The work is of value to advanced medical college students and to practicing surgeons.

BRUNSCHWIG ALEXANDER

Radical surgery in advanced abdominal cancer Chicago The University of Chicago Press, 1947 324 p illus. 25 cm. (The University of Chicago Committee on Publications in Biology and Medicine) $7.50 1211

Contents (abridged): Operable and inoperable carcinoma. Nonsurgical contraindications to radical resections of abdominal cancer. Supportive treatment for patients undergoing extensive intra-abdominal operations. Total gastrectomy. Operations for gastric carcinoma that has extended to neighboring viscera. Operations in the presence of perforated gastric carcinoma. Operations for recurrent gastric cancer—gastrectomy for metastatic carcinoma (to the stomach). Operations for advanced cancer of the small intestines. Operations for advanced cancer of the colon. Carcinoma of the head of the pancreas. Operations for hepatic neoplasms. Operations upon the spleen involved in advanced intra-abdominal cancer. Operations upon the adrenal gland. Operations for intra-abdominal extension of gynecologic cancer—complications of irradiation therapy. Results of radical surgical excision in 100 cases of advanced abdominal cancer. Conclusions. Index.

Note: In this important book one hundred cases of advanced abdominal cancer which were operated on by the author at the University of Chicago Clinics are discussed as to diagnosis, surgery and post-operative results. The essential purpose is a study of whether standard concepts of inoperability should be modified in view of recently developed knowledge and techniques which have reduced the risks of major surgery. Massive resections were required in all of the cases; yet 11% of the group, with an average post-operative survival of 40 months, were alive when the manuscript of the book was completed, and significant palliative results were obtained in 44% of the cases. The surgical treatment of each case is described in full detail; and there are more than 100 illustrations.

DAVIS LOYAL

The principles of neurological surgery Third edition thoroughly revised. With 192 engravings containing 348 illustrations and 5 plates 4 in color Philadelphia Lea & Febiger 1946 540 p illus. (part col'd) $7.50 1212

Contents: Neurological diagnosis. Craniocerebral injuries. Intracranial tumors. Intracranial abscesses. Osteomyelitis, cysts, primary and metastatic tumors of the skull. Surgical lesions of the cranial nerves. Spinal cord injuries. Tumors of the spinal cord. Injuries of the peripheral nerves. Pain. Surgery of the autonomic nervous system. The surgical treatment of epileptiform seizures, paralysis agitans and the psychoses. Cervical rib, syringomyelia and traumatic arteriovenous aneurysm. Hydrocephalus and spina bifida. Index.

Note: (1943) Not a treatise for the experienced neurologist or specialist in neurosurgery but a rather full discussion of the subject for the information of students and, especially, general practitioners. Its essential purpose is to inform physicians who are not specialists in neurology of the scope and fundamental techniques of neurosurgery so that they can intelligently treat and advise their patients who have nervous disorders. In this edition the general plan and the larger part of the contents of the book are the same as in the preceding edition. However, there have been significant revisions in certain parts, particularly in the chapter on cranial cerebral injuries, the chapter on intracranial tumors, and the chapter on diagnosis. Many small parts of other chapters have been expanded or rewritten. Considerable material has been incorporated from neurosurgical experience during World War II.

DONALDSON JOY KENNETH

Surgical disorders of the chest, diagnosis and treatment. Second edition, thoroughly revised. With 146 illustrations and 2 color plates. Philadelphia Lea & Febiger 1947 485 p illus. (part col'd) 24 cm. $8.50 1213

Contents (abridged): Part I, Inflammations, tumors, congenital anomalies of the thoracic wall; and thoracic injuries. Part II, Nontuberculous intrathoracic infections; pleurisy including tuberculous empyema; pulmonary embolism and infarction; intrathoracic tumors and congenital abnormalities. Part III, Surgical therapy in pulmonary tuberculosis—comments on anesthesia and prevention and treatment of postoperative pulmonary complications—resuscitation and inhalation therapy. Index.

Note: Written for non-specialists in thoracic surgery, this work nevertheless presents a very inclusive account of modern techniques in this field. Etiology, pathology, diagnosis, and treatment, both surgical and nonsurgical, are covered compactly but adequately. The purpose is twofold: (1) to aid general practitioners and diagnosticians in diagnosis and in deciding when reference to a specialist is indicated; and (2) to aid general surgeons in performing operations on patients who cannot be sent to a specialist. To aid the latter group, modern operative techniques are described in considerable detail. In preparing the present edition the work was thoroughly revised and is now about one hundred pages longer. In addition to considerable reorganization, there are several new chapters, and most of the older ones have been revised. Good bibliographies accompany the chapters. There are now 141 illustrations. Many of these, unfortunately, are poorly reproduced.

SACHS ERNEST

The care of the neurosurgical patient before, during and after operation. With 177 illustrations including two in color St. Louis The C. V Mosby Company 1945 268 p. illus. (part col d) 25 cm. $6 00 1214

Contents Preoperative examination and care. The operating room. Anesthesia. General discussion of neurosurgical methods. Cranial cases with the operative procedures that were employed. Spinal and peripheral nerve operations. Closure of wounds. Postoperative care. Review of neurological surgery and glimpses into its future. Index.

Note This book is not primarily for nurses but is designed for hospital health officers and young neuro-surgeons and it is intended to supplement treatises on neuro-surgery The author's experience indicates that small details in the care of neuro surgical patients are often of paramount importance. From this standpoint he discusses such topics as the details of examination, pre-operative care medicine, and instruments used in connection with neuro-surgical cases. Fully half of the book, however deals with surgical procedures. The author gives simple but detailed descriptions of his preferred method for handling certain typical brain and nerve operations, and supports his descriptions with detailed case histories. There are more than one hundred footnote references to pertinent literature.

SCHEINKER, I. MARK

Neurosurgical pathology Springfield Ill. Charles C Thomas, 1948 370 p illus (part col'd) 24 cm. $8 75 1215

Contents Cerebral swelling Central nervous system injuries. Tumors of the nervous system—intracranial tumors. Cerebral abscess. Hydrocephalus. Bibliography Index.

Note Using functional approach to the problem, the author of this treatise undertakes to provide information that will increase the reliability of postoperative prognoses in cases involving injuries to the central nervous system, or intracranial tumors. He emphasizes especially the importance of the diffuse or indirect effects upon the nervous tissues adjacent to tumors. The arrangement of the text is based on new definitions and classifications. The main body of each chapter consists f histological and clinical findings, richly illustrated with reproductions of microphotographs The work is of interest to specialists in neurosurgery and to pathologists. There are 238 figures and the bibliography includes approximately 800 citations.

SPAETH EDMUND BENJAMIN

Principles and practice of ophthalmic surgery Fourth edition, thoroughly revised with 649 illustrations, containing 1251 figures and 8 colored plates Philadelphia Lea & Febiger 1948 1044 p illus. (part col d) 24 cm. $15.00 1216

Contents (abridged) General pathology of the orbit. Surgery of the lacrimal apparatus. Enucleation and allied operations. Complete symblepharon. The physiology of strabismus. The essentials of reconstructive ophthalmological plastic surgery Surgical conditions of the lids. Anatomical factors connected with surgical procedures on the eyeball. Surgical conditions of the conjunctiva Surgery of the sclera and the cornea. Surgery of the iris and the anterior chamber Etiology and differential diagnosis of cataract. The technique of the cataract operations. The surgery f glaucoma in specific instances. The surgical treatment of retinal separation Traumatisms of the globe and lids. Roentgen ray and radium therapy Author index. General index

Note (2449) A standard textbook for advanced students and reference book for practicing surgeons It is comprehensive in scope and covers all of the operations with hich the author has had experience as well as selection of other procedures hich are widely used. There has been no basic or organizational change in the work in the present edition, but amplification of material in various sections here recent developments demanded change has resulted in lengthening of the work by about one hundred pages. The number of illustrations has been essentially increased.

SPIVACK JULIUS LEO

The surgical technic of abdominal operations. Fourth edition revised. 682 illustrations on 362 figures mostly original. Springfield, Ill. Charles C Thomas 1946 710 p illus. 25 cm. $11 00 1217

Contents Part I, General surgical technic in the abdominal cavity Abdominal incisions. Anatomy of the small and large bowel—intestinal localization. Methods of entering the stomach and bowel. Intestinal anastomosis. Enterostomy—colostomy Aseptic methods in gastro-intestinal surgery Surgery of the large bowel. Part II, Anatomy of the stomach. Gastrotomy Gastrostomy Pyloroplasty Operations for congenital pyloric stenosis. Gastroplication. Gastropexy Excision of gastric (or duodenal) ulcer. Part III, Gastro-enterostomy Gastro-duodenostomy Gastrectomy Part IV Surgery of the gall bladder and biliary passages. Surgery of the liver Surgery of the spleen. Surgery of the pancreas. Part Hernia. Gynecological operations. Index.

Note A standard text and reference book which is outstanding for its clear step-by-step descriptions of modern operating techniques. N prior knowledge of any technique is assumed. Such elementary details as knot tying are not only explained in the text but are shown in sequence in clear drawings. In most instances, several modern techniques for the same operation are described. Extensive bibliographies appended to the chapters make it simple for the student or surgeon to pursue the study of any given technique further Although the major part of the book is the same as in the preceding edition, significant changes have been made, and the type was reset.

WATSON LEIGH FESTUS

Hernia. Third edition enlarged and thoroughly revised With three hundred twenty three illustrations by Helen Lorraine, Willard C. Shepard and Ralph Sweet. St. Louis The C. V Mosby Company, 1948 732 p illus. 25 cm. $13.50 1218

Contents (abridged) Complications or accidents of hernia. Complications of strangulation. Hernial tuberculosis. Hernia and volvulus of the omentum. Inguinal hernia. Interstitial hernia. Internal supravesical hernia. Local and spinal anesthesia. The operations for inguinal hernia. Inguinal hernia in infants and children. Femoral hernia. Umbilical hernia. Epigastric hernia. Diaphragmatic hernia. Internal hernia. Lumbar hernia. Obturator hernia. Sciatic hernia. Perineal hernia. Sliding hernia. Hernia of the vermiform appendix. Hernia of the bladder Hernia of ovary fallopian tube, and uterus. Hernia into the broad ligament. The truss treatment of hernia. Injection treatment of hernia. Industrial hernia. Authors index. Subject index.

Note. (2434) The object of this book is to present the most important features of the anatomy etiology symptoms, diagnosis, differential diagnosis, and prognosis of hernia, together with the best modern operative techniques. It is designed for the guidance of practicing surgeons. Considerable space is given also to non-surgical therapies. In this edition there are new chapters on supravesical hernia, epigastric hernia, hernia in the broad ligament, and recurrent spinal hernia. The Babcock operation is given in detail. Many of the illustrations are new

ORTHOPEDIC SURGERY

BICK EDGAR MILTON

Source book of orthopaedics Second edition Baltimore The Williams & Wilkins Company 1948 540 p illus 23 cm. $8 00. 1219

Contents (abridged) Part I, Orthopedic surgery before the 19th century Part II, Contemporary orthopedic surgery and its recent sources: Physiology Morphology and genetics. Pathology Bone surgery Fractures. Surgery of the articulations. Congenital dislocation of the hip, and special surgery of the hip joint. Surgery of the neuromuscular apparatus. Deformities of the spine. Static deformities of the feet. Mechanical, physical, manipulative, and drug therapy Rise of orthopedic hospitals and institutions. Appendices: Orthopedic journals. General bibliography Index.

Note The gradual development of orthopedic surgery from ancient times to the present day is traced in detail in this work, which is both history and reference guide to the books and papers in which significant contributions were first published. The author's method is to summarize in running narrative the important publications bearing on each topic and subtopic and to refer by means of superior numbers from his text to citations of the original sources. The material is not limited to surgical techniques but includes related material on pathology chemotherapy etc. In this edition the

revisions are fairly extensive. New text bearing on the background of techniques which have recently come into prominence and new illustrations have been added.

BRADFORD FRANCIS KEITH, AND R. GLEN SPURLING

The intervertebral disc with special reference to rupture of the annulus fibrosus with herniation of the nucleus pulposus. Second edition. Springfield, Ill. Charles C Thomas 1945 192 p illus. 26 cm. $5 50 1220

Contents: Introduction The embryology anatomy and physiology of the intervertebral disc. The pathology of the intervertebral disc. The clinical and roentgenological investigation of patients with low back and sciatic pain. The clinical findings in lumbar herniations of the nucleus pulposus. Treatment and results. Discussion of history and findings in herniated nucleus pulposus and allied conditions. Cervical and thoracic herniations of the nucleus pulposus. Case reports. Conclusions. Bibliography Index.

Note. A comprehensive monograph of the knowledge of clinical manifestations of intervertebral disc lesions. Lesions of neurological interest are emphasized, but there is much related material which is of interest in other specialties than neurology Since the publication of the original edition in 1941 much new information has been gained and this is reflected in alterations and additions, both in the text and illustrations in the present edition. The former chapter on the clinical and roentgenological investigations of patients' back pains is considerably expanded. The chapter on cervical and thoracic herniations includes new material on lateral cervical herniations and on conditions simulating neoplasms and there are other changes in other parts of the book. Approximately fifty references have been added to the bibliography The total number is now 307 There are seventy illustrations.

KESSLER, HENRY HOWARD

Cineplasty with a foreword by Ross T McIntire. Springfield, Ill. Charles C Thomas 1947 201 p illus. (part col'd) 23 cm. $6 75 1221

Contents General considerations. Functions of the upper extremity Mechanical prostheses. Cineplasty—history Cineplasty—physiology and anatomy Cineplasty—surgical technique. Cineplasty—aftercare and complications. Cineplastic prostheses. Congenital amputations. Double arm amputations. Plastic procedures. Rehabilitation. Bibliography Index.

Note: A description of modern surgical methods of utilizing the tendons and muscles in amputation stumps as motors for the operation of mechanical hands, feet, arms, and legs The book is thoroughly illustrated with photographs, drawings, and diagrams, and is based on the author's more than 20 years of personal experience in the restoration of amputees to lives of normal activity The volume is addressed to surgeons, physicians, and rehabilitation workers.

LEWIN PHILIP

The back and its disorders. New York Whittlesey House, McGraw Hill Book Company Inc., 1948 157 p illus. 21 cm. (Whittlesey House health series Morris Fishbein editor) $2 75 1222

Contents: What goes into your back—and what comes out of it? Why an aching back? What's the matter with me? What can you do, doctor? What's the outlook? Mother Nature's failures. How do you stand with the world? Bacterial infections of the spine. Disorders of the nervous system. The injured back. Arthritis of the spine. Curvature of the spine. The intervertebral disk. Sacroiliac pain. Tumors of the vertebrae and spinal cord. Backache and overweight. The role of the genitourinary system. The back in review Glossary Index.

Note An informative and reliable book prepared by the Professor of Bone and Joint Surgery at Northwestern University Medical School, designed specifically for laymen. In non-technical language it describes the anatomy and physiology of the back, and discusses the more common disorders of this part of the body and the present-day methods of treatment.

LEWIN PHILIP

The foot and ankle their injuries, diseases, deformities and disabilities. Third edition thoroughly revised. With 389 illustrations line drawings by Harold Laufman. Philadelphia Lea & Febiger 1947 847 p illus. 24 cm $11 00 1223

Contents (abridged) Embryology and anatomy of the foot and ankle. Physiology and biomechanics of the foot and ankle. Basic principles of foot and ankle disturbances. Basic principles of treatment of foot and ankle disturbances. Congenital defects and deformities. Static defects and deformities. Pes cavus—claw-foot. Affections of the great toe. Disturbances in the region of the heel. Disturbances of the epiphyses of the foot and ankle. Affections of muscles, tendons, fascia, and bursae of the foot and ankle. Fractures of the bones of the foot and ankle. Dislocations of the foot and ankle joints. Military aspects of foot and ankle disorders. Infections of the foot and ankle Arthritis of the foot and ankle. Neurological lesions affecting the function of the foot and ankle. Anterior poliomyelitis—infantile paralysis Spastic paralysis involving the foot and ankle. Peripheral vascular lesions of the lower extremities. Gangrene of the foot and ankle. Abnormalities and affections of the toenails. Foot hygiene and sanitation The relation of back, pelvis, hip, thigh, knee and calf to the foot and ankle. Surgical technic as applied to the foot and ankle. Appendix. Bibliography Index.

Note. (1652) A comprehensive treatment of foot and ankle disorders, including both congenital disorders and those due to disease or accident. Relations between foot defects and other troubles such as back-aches, knee pains, and hip pains are also discussed. In the present edition the work is nearly two hundred pages longer than in the second edition. Compound fractures, crushing wounds, and osteomyelitis are given new emphasis. Material has been added on chemotherapy and on administration of blood or blood plasma in treatment for shock. Psychosomatic considerations in relation to orthopedic conditions are discussed briefly There are eighty-five more illustrations, the total in the present edition being 389 The bibliography has been extended.

MILCH HENRY

Osteotomy of the long bones. Springfield Illinois Charles C Thomas 1947 294 p illus. 24 cm. $7.50 1224

Contents (abridged) Historical review The objective of osteotomy Lineal osteotomy Torsional osteotomy Parallax test for rotation. The transpositional osteotomy The angulational osteotomy On the use of Nelaton's line. The pelvi-femoral angle. The pelvic support osteotomy The neck of the femur The post-osteotomy angle. Leg lengthening by abduction osteotomy The osteotomester The Schanz versus the Lorenz osteotomies. The abduction osteotomy in the treatment of fractures of the femoral neck—in osteo-arthritis of the hip joint—in tuberculosis of the hip. Author index. Index of subjects.

Note A practical, thoroughly illustrated discussion of the technique of osteotomy Although intended for general surgeons rather than orthopedists, the author's use of trigonometry in correction measurements and his observations on hitherto unsuspected orthopedic relationships will be of interest to the latter group also. Discussions of theory are directly related to practice by means of case histories which are illustrated with reproductions of both photographs and roentgenograms. There are 115 literature references, all keyed to the text.

MOSELEY HERBERT FREDERICK

Shoulder lesions. Springfield Illinois Charles C Thomas, 1947 181 p illus. 26 cm. $5.50 1225

Contents. Mechanism of the shoulder Examination of the shoulder. Ruptures of the rotator cuff. Subluxations and dislocations. Calcified deposits in the rotator cuff. The bicipital syndrome Periarthritis and allied conditions around the shoulder. Neurological aspects of shoulder pain, by F L. McNaughton. Certain injuries and their treatment. X ray diagnosis and treatment, by J. Bouchard and C. B Peirce Operative procedures on the shoulder. Re-education of the shoulder function Conclusions. Case records. Index.

Note A useful, compact presentation of the current knowledge of the disorders of the shoulder girdle, including both the humeral joint and the clavicle. It is intended for practical use by graduate surgeons and medical practitioners. It is less comprehensive than E. A. Codman's *The shoulder* privately printed, 1934 and is not designed to supersede that treatise but it covers the subject from a different viewpoint and also discusses the developments since 1934. There are more than seventy figures, most of which are reproductions of either photograms or roentgenograms The author is member of the faculty of McGill University Medical School.

NICOLA TOUFICK

Atlas of surgical approaches to bones and joints with a foreword by Norman T Kirk. New York The Macmillan Company 1945 218 p. illus. 28 cm. $5 50 1226

Contents Part I, Shoulder girdle Clavicle Sternoclavicular joint. Acromioclavicular joint. Scapula. Part II, Upper extremity Shoulder joint. Humerus Elbow Radius and ulna. Wrist. Fingers. Part III, Trunk: Cervical spine. Cervical rib. Dorsal spine. Lumbar spine. Ilium. Ischium. Part IV Lower extremity: Hip joint. Lesser trochanter of the femur. Shaft of the femur. Knee joint. Tibia. Fibula. Ankle joint. Calcaneus. First metatarsophalangeal joint. Part Skull Temporomandibular joint. Mandible.

Note. A collection of reproductions of original drawings in which the anatomy of surgical approaches to bones and joints is illustrated. The necessary incisions for each operation are shown in sequence, and in each drawing of series the major muscles, nerves, arteries, and veins that will be exposed at the particular stage of the operation are shown. Directions for making incisions, isolating nerves, retracting muscles, etc. so as to avoid unnecessary damage are given in short legends adjacent to the illustrations. The drawings are well executed and are reproduced on reasonably large scale. The book is intended as reference guide for surgeons.

SHANDS, ALFRED RIVES JR.

Handbook of orthopaedic surgery Third edition In collaboration with Richard Beverly Raney Illustrated by Jack Bonacker Wilson. St. Louis The C V Mosby Company 1948 574 p illus. 22 cm. $6 00. 1227

Contents (abridged) Congenital deformities. Affections of growing bone. Affections of adult bone. Infections of bone. Infections of joints. Tuberculosis of bones and joints. Chronic arthritis. Infantile paralysis. Neuromuscular disabilities (exclusive of infantile paralysis) Tumors. Fracture deformities. Affections of the spine and thorax Affections of the low back. Affections of the hip Affections of the knee. Affections of the ankle and foot. Affections of the neck and shoulder Affections of the elbow wrist, hand, and jaw Bibliography Index.

Note (1633) This text and reference book for the medical student and general practitioner offers the basic principles of diagnosis and treatment. Since the various chapters have been submitted to specialists representing 18 different medical schools the book constitutes consensus of current opinion. In the present edition brief sections have been rewritten and some new material has been added, such as that on discoid cartilages in the chapter on affections of the knee. Additional listings in the extensive bibliography bring it up to date.

STEINDLER, ARTHUR

The traumatic deformities and disabilities of the upper extremity by Arthur Steindler in collaboration with John Louis Marxer Springfield Illinois Charles C Thomas 1946 494 p illus 26 cm $12 00 1228

Contents: Part A, General considerations pertaining to traumatic disabilities of the upper extremity: Traumatic deformities of upper extremity and restoration of form. Restoration of function. Pain factor in traumatic disabilities of upper extremity General surgical principles applying to upper extremity Part B, Special part Traumatic disabilities of shoulder girdle and arm. Traumatic disabilities of elbow joint. Traumatic disabilities of forearm and wrist Traumatic disabilities of forearm and wrist from tendon injuries. Traumatic deformities of hand and fingers Index

Note The author has written this monograph as case book rather than text because the complex nature of the deformities and disabilities resulting from traumatic injuries does not permit any consistent grouping according to anatomical or functional principles. A general discussion of the subject matter including restoration of form and function by various methods, is contained in Part A. The "special part" B, which forms the major portion of the text, is subdivided according to the skeletal elements of the upper extremity and it is here that the numerous case reports are analyzed from various aspects: mechanical, diagnostic, therapeutic, and surgical. The individual case reports are accompanied by statistical data. The book contains many interesting photographs, as well as list of illustrations, an author index, and subject index. Bibliographical references are given for each of the two parts separately

THOMAS ATHA AND CHESTER C HADDAN

Amputation prosthesis anatomic and physiologic considerations, with principles of alignment and fitting Designed for the surgeon and limb manufacturer 207 illustrations. Philadelphia J B Lippincott Company 1945 305 p illus. (part col d) 23 cm. $8 00 1229

Contents: Development of modern amputation prosthesis. The amputation stump. Prostheses for amputations of lower extremity Alignment and fitting of lower-extremity prostheses Upper-extremity prostheses. Prostheses for children. Rehabilitation of the amputee. Index.

Note A practical book which is intended to inform orthopedic surgeons and limb manufacturers of the fundamentals of each others' work, so that they can cooperate to best advantage in providing for patients who need artificial limbs. Amputations are discussed from the viewpoint of preparing the patient for prosthetic appliances. The types of artificial limbs and the materials used in them are described in relation to different types of amputation. The mechanical problems of balance and locomotion are carefully discussed. Special consideration is given to problems which arise from war injuries. There is discussion of cineplastic prosthesis. The chapter on prostheses for children considers cases of congenital deformities and also paralysis. The chapters include references to the related literature.

YEAR BOOK OF ORTHOPEDICS AND TRAUMATIC SURGERY

The 1948 Year book of orthopedics and traumatic surgery edited by Edward L. Compere. Chicago The Year Book Publishers, Inc., 1949 464 p illus. 19 cm (The practical medicine year books) $5.00 1230

Contents Poliomyelitis. Congenital deformities. Nutrition and metabolism The epiphyses. Tuberculosis. Osteomyelitis and other infections. Tumors, cysts and fibrodysplasia. Arthritis and rheumatism. Fractures, dislocations and sprains. The spine and pelvis. The neck, shoulder and arm. The hand. The hip, leg and knee. The foot and ankle. Plastic surgery of the trunk and extremities. Amputations and prostheses. Surgical technic. Instruments and appliances. Miscellaneous. Index. Index to authors.

Note This work is edited and organized similarly to the other books in this useful series. Selections from the world medical literature are abstracted at some length, some abstracts running to 300 words or more. Footnote references are given in all cases to the original publication. The abstract is sometimes supplemented by an explanatory note written by the editor There is generous number of illustrations (241 in the issue at hand)

PLASTIC SURGERY

BROWN ADOLPH MARTIN

Modern plastic surgical prosthetics. New York Grune & Stratton 1947 293 p illus. 22 cm. $6 75 1231

Contents Part One, General considerations. The prosthesis laboratory Part Two, Examination of the patient. Making the negative impression. The positive cast. The materials used in prosthetic sculpture Sculpture. Separating compounds Finishing the mold. Part Three, Nasal prostheses. Prostheses for the eye and orbit. Prosthetic restorations for the breast. Aesthetic correction of lower limb deformities with finished latex prostheses. Prosthetic restorations for the hand and parts of the hand. Prostheses as implants in plastic surgery Part Four Plastic materials. Latex. Colors suitable for rubber latex prostheses. Acrylic resins. Vinylpolymers as prosthetic materials. Other flexible plastic materials suitable for prostheses. Bibliography Illustrations. Index.

Note A manual of materials used and methods followed in making artificial restorations of missing or deformed parts of the human body especially the face. The mechanics of artificial limbs is not covered. There are 180 plates that illustrate techniques and the "before and after" appearances of patients. The book is of interest chiefly to plastic surgeons.

BULBULIAN, ARTHUR H

Facial prosthesis. 202 illustrations. Philadelphia W B Saunders Company 1945 241 p illus 24 cm. $6 00 1232

Contents (abridged) Historical review Indications for prosthetic restorations. Materials that may be used in the construction of prosthetic restoration. Office and laboratory facilities—instruments and supplies. General principles in taking impressions and making casts. Reconstruction of the nose Reconstruction of the ear. Reconstruction of the orbit and the eye. Prevulcanized latex and methods of compounding it for use in making latex restorations. Use of plastics in facial prosthetics. Methods of retention. Full facial casts as an aid in facial prosthetic restorations. Additional materials commonly used in making facial prosthesis. Appendix. Index.

Note A book of practical information for physicians, surgeons, and dentists who may need to do facial reconstructions. The section on general considerations is followed by descriptions of practical methods for making molds and prostheses for nose, ear and eye, in both latex and plastic. There are more than 200 figures. These portray case histories with "before and after" views and also show steps in technical processes.

CLARKE, CARL DAME

Facial and body prosthesis. St. Louis The C. V Mosby Company 1945 200 p. illus. 25 cm. $5.00 1233

Contents. Moulage prosthesis in general. Molds. Wax molds. Agar compositions for molding Wax-resin mixtures. Microcrystalline waxes. The control of expansion and contraction of rubber casts. The rubber prosthesis. Coloring and applying facial prostheses. The application and wearing of facial prostheses Facial and body prosthesis in relation to war wounds Repair of cranial defects by cast chip-bone grafts. The use of resilient and elastic resins in prosthetics. Index.

Note: In this work the materials and techniques used in the preparation of casts, molds, and finished prostheses for hands, ears, noses, portions of the skull, etc., are presented in explicit detail. The text is supplemented by numerous photographs, some of which are arranged in step-by-step sequences. Formulas for various types of molding compounds are included, and there are references to related literature.

PADGETT EARL CALVIN

Plastic and reconstructive surgery With the collaboration of Kathryn Lyle Stephenson. Springfield, Ill. Charles C Thomas 1948 945 p illus. 29 cm. $22.50 1234

Contents (abridged) Skin flaps. Transplantation of skin, derma, and mucosa. Transplantation of bone and cartilage. Transplantation of fat, fascia, tendons, and nerves. Transplantation of other miscellaneous tissues and organs. The general care of wounds of the soft tissues Traumatic surgery of the nerves, tendons, and blood vessels. Traumatic surgery of the head, face, and neck. Traumatic surgery of the extremities. The early care of the thermal and physicochemical injuries. Reconstructive surgery of the head and forehead. The reconstruction of congenital clefts. Reconstructive surgery: Of the nose. Of and about the orbit. Of the ear Of the cheek and face. Of the mouth and jaw Of the neck. Of the chest wall, breast, esophagus, and heart. Of the abdominal wall, abdomen, and back. Of the uro-genital organs, perineal and anal regions. Of the skin and subcutaneous tissues of the extremities. Of the deep soft tissues of the extremities. Of the hard tissues of the extremities. Prosthesis and cineplastic amputations and reconstructions. Appendix. Index.

Note. A comprehensive presentation of this subject, written by one of the outstanding contemporary authorities in the field. It covers not only the techniques which are in current use but also those of historic interest. All modern techniques are fully illustrated, most of them in step-by-step sequences; and some of the historical ones are pictured also. As the contents indicate, some operations which are usually performed by surgeons in other specialties, such as urology are covered in addition to operations usually done by plastic surgeons The related literature is fully cited in chapter bibliographies. The book is designed for specialists in the field and also for other surgeons who are occasionally called upon to perform reconstructive surgery

DENTISTRY

AMERICAN DENTAL ASSOCIATION

Accepted dental remedies including a list of accepted products together with other information compiled to promote rational therapeutics in dentistry Fourteenth edition. Chicago American Dental Association 1948 218 p illus. 21 cm. $1 50 1235

Contents: Members of the Council. List of consultants. Acids and simple salts. Alcohols and ketones. Ammonia. Analgesics, sedatives and hypnotics. Anesthetics. Antibiotics and antiseptics. Astringents, hemostatics and vasoconstrictors. Atropine preparations. Caffeine preparations. Dentifrices. Denture adherent powders. Detergents. Magnesium preparations. Mechanical aids. Mouth washes. Mucilaginous substances. Nutritional factors. Oils, fats, waxes and resins. Pilocarpine compounds. Saccharin compounds. Zinc oxide preparations. Prescriptions, formulas and tables. Official rules of the Council. Symptoms and treatment of acute poisoning. Unaccepted products. Bibliography to miscellaneous publications General index.

Note The standard reference book of acceptable drugs and medicines for use in dentistry It is published annually, and each new edition is intended for use only during the year of issue. In general, the information given about each drug covers the following points: official name, chemical group, chemical formula, molecular weight, substances from which prepared, properties, actions and uses, dosage, and names and addresses of one or more American manufacturers. Each new edition of the publication contains some revision. In the present edition revisions were made in the material on such drugs as penicillin, the sulfonamides, fluorides, and epinephrine. The bibliography of articles about products which were found not acceptable, also the bibliography of other reports which have been published from time to time in the Journal of the American Dental Association, are useful features which serve to guide readers to much additional material on dental remedies.

AMERICAN DENTAL ASSOCIATION COMMITTEE ON LIBRARY AND INDEXING SERVICE

Index to dental literature, 1942–1944 An alphabetical subject and author index. A list of dental books, 1946 Chicago American Dental Association 1946 354 p 27 cm. $10 00 1236

Contents Table of contents. List of books published 1942–1944 List of journals indexed for years 1942–1944 Alphabetical subject and author index. Index to dental literature. Dental index headings.

Note A standard bibliography which is arranged in dictionary style with authors' names and subject entries in single alphabet. Articles, editorials, and abstracts pertaining to dentistry which were published in total of 126 periodicals published in English and printed both within and outside the United States of America are indexed in this volume.

BRAUER JOHN CHARLES AND OTHERS

Dentistry for children by John Charles Brauer L. B Higley, Maury Massler Isaac Schour Second edition. Philadelphia The Blakiston Company 1947 417 p illus. 24 cm. $8 50 1237

Contents Part Fundamental considerations in the practice of dentistry for children Psychologic development of the child (parent and child management) Development of the teeth—normal and abnormal by I Schour and M Massler Morphology and histology of the primary teeth, by I Schour and M Massler Preventive orthodontics, by L B Higley Dental caries in the growing child Lesions and infections of the oral soft tissues, by M Massler and I Schour Nutrition and oral disease—general considerations: the vitamins—the minerals, nutriments, and clinical considerations, by I Schour and M. Massler The endocrine glands, by M. Massler and I. Schour Part II, Technical procedures in the practice of dentistry for children Preventive dentistry Pulp and root canal therapy in primary and young permanent teeth. Space maintenance. Treatment and restoration of fractured and displaced permanent and primary anterior teeth. Oral surgery for children. Index.

Note. (7670) A comprehensive treatment of the special aspects of dentistry that are of importance in the dental care of children. The first chapter discusses office routines and the second provides brief survey of the office management of young children and of their parents. The remainder of the book is of interest both to dentists and to pediatricians. The present edition represents rather extensive revision that has been carried out so as to include the latest concepts of pedodontics and thus make the book more useful to both medicine and dentistry The chapters written by Doctors Schour and Massler are new and the chapter by Dr Higley has been expanded.

BURKET LESTER WILLIAM

Oral medicine, diagnosis—treatment. With a section on Oral aspects of aviation medicine by Alvin Goldhush 350 illustrations, 60 in color on 10 plates. Philadelphia J B Lippincott Company 1946 674 p. illus. (part col d) 24 cm. $12 00 1238

Contents (abridged) Section One, General considerations: Medical-dental relations. The patient's history Laboratory procedures. Section Two, Focus-infection infections, metal intoxication and intolerance. Section Three Diseases of the tongue and dermatologic diseases of dental interest, minor stomatitides. Section Four Diseases of the organ systems The respiratory system. The cardiovascular system. Gastro-intestinal disease. The urogenital system. The reproductory system. Endocrines. Diseases of the bones and joints. Diseases of the muscles, nerves, and nervous system. Section Five, Nutritional deficiencies and diseases of metabolism The vitamins. Diseases of metabolism. Section Six, Diseases of the blood and blood-forming organs. Section Seven The specific infectious granulomata. Section Eight, Focal infection, dental pediatrics and geriodontics, hazards of dental practice dental diseases of occupational origin. Section Nine, Oral aspects of aviation medicine. Section Ten, Color atlas. Section Eleven, Regional diagnostic index. Index.

Note: The preparation of this volume arises from the author's belief that the dentist has "unique opportunity to recognize the earliest signs of disease while still curable or controllable." The book is concerned not only with those diseases which originate in the oral cavity but also with the pathology, diagnosis, and treatment of various systemic diseases, fact which makes it of value to the general physician. The various types of lesions are fully illustrated and extensive bibliographies are included.

CARR MALCOLM WALLACE

Dentistry an agency of health service. New York The Commonwealth Fund 1946. 243 p 21 cm. (New York Academy of Medicine. Committee on Medicine and the Changing Order Studies) $1 50 1239

Contents Preface by Robert Whitney Bolwell. The present status of organized dentistry Part I, History Historical development of the autonomous dental profession. International dental relations. Part II, Education Predental education, the dental curriculum, and graduate education Hospital internships and residencies. Part III, Dental practice The practice of dentistry Hospital dental service. Dentistry in industry Public health dentistry Dental practice in rural areas. Dentistry for Negroes. Preventive dentistry National dental legislation Part IV Research General discussion of research. Problems for investigation and current progress. Research in dental materials. Part Dental socio-economics Problems of dental socio-economics Part VI, Summary and conclusions. Index.

Note The monograph has been written for the dentist, doctor, public health worker and layman, and is one of the series of mono-

cal studies sponsored by the New York Academy of Medicine. It provides a compact but inclusive discussion of dentistry from the standpoint of its place in a public health service.

COOLIDGE EDGAR DAVID

Clinical pathology and treatment of the dental pulp and periodontal tissues Second edition thoroughly revised. Illustrated with 350 engravings. Philadelphia Lea & Febiger 1946 511 p. illus 24 cm. $7 00 1240

Contents (abridged) Dental pain and its diagnosis Treatment of the dentin. Treatment of the dental pulp in which vitality should be preserved Treatment of vital pulps that should be removed. Anatomy of root canals with relation to pulp removal and root-canal filling. Principles and technique of filling root canals. Treatment of teeth with inflammatory disturbances of the apical periodontal tissues. Dental prophylaxis. Treatment of gingivitis. Gingivitis associated with systemic disturbances Functional response to excessive or abnormal occlusal stress and the treatment of functional and traumatic injuries in the periodontal tissues. Periodontitis, treatment of suppurating periodontal pockets. Periodontosis and its treatment. Treatment of atrophy of the periodontal tissues. Index.

Note. This book is both a text for advanced dental college students and a practical treatise for dental practitioners. A small amount of historical and basic information is included in several of the chapters, but for the most part the discussion is concerned with aspects of the subject which are of interest to practicing dentists. Such subjects as the treatment of dental pulp are covered thoroughly and much of the discussion is based on the author's own researches at the Chicago College of Dental Surgery. Most of the illustrations are reproduced from original photographs and roentgenograms. There are a number of footnote references to pertinent literature but no attempt at a comprehensive bibliography on the subject.

DAVIS WALLACE CLYDE

Operative dentistry Fifth edition. St. Louis The C. V Mosby Company 1945 432 p illus. 25 cm. $8.00 1241

Contents (abridged) The alleviation and prevention of odontalgia. Preventive dentistry Instrument nomenclature. Treatment of hypersensitive dentine Cavity preparation (general considerations) Management of pit and fissure cavities. Management of proximal cavities in bicuspids and molars. Management of proximal cavities in incisors and cuspids not involving the angle Management of proximal cavities in incisors involving the angle. Management of cavities in the gingival third Management of abraded surfaces—occlusal and incisal. Manipulation of cohesive gold in the making of a filling. Silicate filling. Fused porcelain filling. The making and setting of a gold inlay Amalgam filling. The use of cements in filling teeth. Periodontoclasia. Endodontia. Pulpectomy with anesthesia Partial pulpectomy Pulp putrescence. The aseptic management of putrescent pulp canals The filling of pulp canals. Endodontia for children deciduous and permanent teeth Review of dental histology Index.

Note A practical text for dental students covering methods of examination, problems of diagnosis, special techniques, and instruments. The large collection of photographs of enlarged plaster models, showing typical cavities and their proper fillings, is an unusual and valuable feature of the book. The volume is essentially a revision of the authors' earlier work entitled *Essentials of operative dentistry* (1923) but the material has been so revised and reorganized as to almost constitute a new work.

EASLICK KENNETH A., editor

Dental caries mechanism and present control technics as evaluated at the University of Michigan Workshop St. Louis The C. V Mosby Company 1948 234 p. illus. 25 cm. $5 00 1242

Contents (abridged) The critical appraisal of dental caries research—its importance to progress in oral health, by D. A. Wallace. Objectives and organization of the Caries Control Workshop, by K. A. Easlick. Some local factors in the development of cavities—plaques, acidity aciduric bacteria, proteolytic bacteria, by R. M. Stephan. Factors in immunity and susceptibility to dental caries, by M. B. Williams. The effect of systemic disease on the caries process—pregnancy, endocrinopathies, osteomalacia, emotional disturbances, and others, by H. B. G Robinson. Prophylaxis, toothbrushing, and home care of the mouth as caries control measures, by M. K. Hine. The degradation of sugars in the mouth and the use of chewing gum and vitamin K in the control of dental caries, by L. S. Fosdick. The effectiveness of dentifrices, mouthwashes, and ammonium-ion compounds in the control of dental caries, by R. G. Kesel. The use of penicillin in dental caries control, by T J. Hill. An evaluation of the effectiveness as caries control measures of ingested fluorides in water food, bone flour and proprietary preparations, by F A. Arnold, Jr An evaluation of the effectiveness as a caries control measure of the topical application of solutions of fluorides, by J. W Knutson. The effectiveness of the topical application of silver salts in the control of caries, by H. A. Zander Fluoride mouthwashes, fluoride dentifrices, and other uses of fluorides in control of caries, by B. G. Bibby An evaluation of the role of vitamins and minerals in the control of caries, by W D Armstrong. The effectiveness of an adequate diet in the control of dental caries, by G. Stearns. The physical consistency of food and refined carbohydrate restrictions—their effect on caries, by H. Becks. The present status of caries control measures, by P Jay Sodium fluoride solutions—technic for application to the teeth, by J. W Knutson. Index of authors and discussers. Index of subjects.

Note The papers comprising this volume were presented at a conference sponsored by the School of Public Health and the School of Dentistry at the University of Michigan. Each paper was prepared by an expert or research worker in the field of dental caries and together they provide a comprehensive review of current knowledge regarding the methods of controlling this disease. Lists of references, and the ensuing discussions held at the conference, are given at the end of each paper

GABEL ARTHUR BERTRAM, editor

The American textbook of operative dentistry in contributions by eminent authorities. Eighth edition, thoroughly revised, with 438 illustrations. Philadelphia Lea & Febiger 1947 674 p illus. 24 cm. $11.00 1243

Contents Examination and diagnosis, by P R. Boyle and K. H. Thoma. Caries, by P Jay Preventive dentistry by R. W Bunting. Mechanics, by A. B. Gabel. Operative procedure, by A. B. Gabel. Metal inlays, by E. B. Spaeth. Porcelain inlays, by W D Vehe. Dentistry for children, by W C. McBride. Special operative procedures, by T J Hill. Restorative materials, by F A. Peyton. Appendix, by A. B Gabel. Index.

Note: As in the previous edition, this volume represents the combined efforts of leading dental authorities and presents a critical survey of the latest developments in the field of operative dentistry The book is designed primarily for the student, but the emphasis placed on practical, clinical procedures makes it also of value to the dental practitioner. In this revision the scope of the earlier volume has been narrowed to conform with the increased trend toward specialization. Thus the earlier chapters on root canal therapy treatment of peridental disease, local anesthesia, surgical procedure, and focal infection have been omitted. There is, however a new chapter on dental caries and the subject of dentistry for children has been enlarged to chapter length. All but two of the chapters conclude with extensive bibliographies.

GOTTLIEB BERNHARD

Dental caries its etiology pathology clinical aspects and prophylaxis 222 illustrations and 7 color plates containing 59 illustrations. Philadelphia Lea & Febiger 1947 262 p illus. 26 cm. $10 00 1244

Contents: Development and structure of enamel. Acid action on enamel. Enamel caries. Acid action on dentin. Dentin caries. Cementum caries. Secondary dentin and related problems. Abrasion. Caries prophylaxis by impregnation of the invasion roads. Fluorine and teeth. References Index.

Note: A distinguished treatise in which there is special emphasis on the relationships between the lamellae in tooth enamel and dental caries. The author who is now Professor of Oral Pathology and Dental Research in Baylor University presents a number of original ideas on other aspects of the problem as well and backs them up with detailed discussions of the origin and histology of tooth enamel. The book is based on his own research and on the pertinent literature. A major proportion of the illustrations is reproductions of microphotographs. The bibliography contains 159 references.

GROSSMAN, LOUIS IRWIN editor AND OTHERS

Lippincott's handbook of dental practice. 306 illustrations. Philadelphia J B Lippin-

cott Company, 1948 417 p illus. 26 cm. $12 00 1245

Contents: Part One, Diagnosis and treatment The prevention of dental caries, by B. G. Bibby and J F Volker Control of dental caries, by L. I. Grossman. Roentgenologic interpretation, by E. C. Stafne. Orthodontics, by A. G. Brodie. Periodontics, by B. Orban. Endodontics, by L. I. Grossman. Diseases of the mouth, by L. W Burket. Prescription writing, by E. C. Dobbs. Anesthesia, by W H. Archer Exodontics, by J. R. Cameron and J J Reiner, Jr. Part Two, Restorative dentistry: Gold inlay restorations The direct method, by E. M. Gravett The indirect method, by H. K. Mathews. Amalgam and silicate restorations, by R. Kornfeld. Ceramic restorations, by C. C. Bastian. Pedodontics, by C. A. Sweet. Crown and bridge restorations, by A. O. Klaffenbach. Partial dentures, by V R. Trapozzano. Complete dentures, by V R. Trapozzano. Index.

Note. Eighteen prominent specialists in the field of dentistry and oral medicine have written the individual chapters of this comprehensive guide for practicing dentists. Although primarily concerned with the techniques and procedures, it rests on solid theoretical ground, and the biological aspect is by no means neglected. Many X-ray photographs illustrate the sections on roentgenologic interpretation and on periodontal diseases. The value of the book as quick reference is based on its clear and consistent arrangement, which includes such details as listings of the subsections not only in the Table of Contents but also under each section title in the text. All but two of the chapters are accompanied by bibliographies.

GROSSMAN, LOUIS IRWIN

Root canal therapy Second edition thoroughly revised illustrated with 94 engravings. Philadelphia Lea & Febiger 1946 354 p illus. 24 cm. $5.50 1246

Contents History of root canal therapy Anatomy of root canals. Diseases of the dental pulp. Diseases of the periapical tissues. Examination and diagnosis Pulp capping Pulpotomy Pulp mummification. Pulpectomy Pulpless teeth and focal infection. Selection of cases for treatment. Principles of root canal treatment. Preparation of the root canal. Sterilization of the root canal Bacteriologic examination. Filling of the root canal Treatment of fractured and traumatized anterior teeth Root resection. Bleaching of discolored pulpless teeth. Treatment of deciduous teeth, by E Gerlach Index.

Note The main purpose of this volume is to serve as practical guide for the dental practitioner however the discussions of basic principles, which are included, makes it also of value to students of dentistry This edition has been extensively revised to include the latest developments in the field and contains an additional 120 pages. The major changes include new section on aerodontalgia, chapter on the treatment of fractures and anterior teeth, and discussions of sulfonamides and other antibiotics in endodontic treatment. Chapter bibliographies are keyed to the textual material.

HOGEBOOM FLOYDE EDDY

Practical pedodontia or juvenile operative dentistry and public health dentistry an introductory text for students and practitioners of dentistry Fifth edition St. Louis The C. V Mosby Company 1946 503 p illus. 25 cm. $8 50 1247

Contents (abridged) Management of the child in the dental office. Mental hygiene viewpoints on the child, by F N Anderson. Growth and development of the child' head. The deciduous teeth. Filling materials used in deciduous teeth Radiography The first permanent molar Prophylactic odontotomy by T P Hyatt. The biochemical aspects of preventive dentistry Prevention of dental caries by nutrition, by H F Hawkins. Space maintenance, diagnosis and treatment. Prosthetic appliances for children Fractured and injured incisor teeth of children and their treatment. The application of plastics to childhood dental service Anesthesia for children, by H. E. Bosch. The abnormal frenum labii Preventive orthodontics. Endocrinology and its relation to dentistry Public health and dentistry Appendix. Index.

Note (1443a) In this volume, designed for the practicing dentist, emphasis is placed on the preventive aspects of work with children. Methods of examination, techniques of operation and the various appliances employed are described and illustrated in detail This edition has been considerably enlarged and brought up to date by the addition of new chapters covering such topics as the business side of dentistry examination and diagnosis, the use of plastic materials, chrome alloy appliances, and preventive orthodontics.

MCBRIDE, WALTER CLAR

Juvenile dentistry Fourth edition thoroughly revised. Illustrated with 298 engravings Philadelphia Lea & Febiger 1945 359 p illus 24 cm. $6 00 1248

Content (abridged) The management of the child. Growth of the mixed dentition. Examination and diagnosis. Prophylaxis and parodontics. Operative procedures for vital deciduous teeth. Pulp management in deciduous teeth. Modified operative procedures for young permanent teeth. Root resection by C. Taylor Hall. Extraction and anesthesia. Preventive orthodontics. Physical diagnosis, by H. V Dwyer Morphology of the deciduous molars, with special reference to the pulp cavity and its relation to cavity preparation. Index.

Note A practical manual of dental care, adapted to the earlier age groups, and based on the author's wide experience in this specialized field. Throughout the book the descriptions of mechanical procedures and techniques are interspersed with sound suggestions for managing the child and obtaining his cooperation. Except for some minor revisions to bring the subject matter up to date, this edition shows little change from the earlier volume.

MCCALL JOHN OPPIE, AND SAMUEL STANLEY WALD

Clinical dental roentgenology technic and interpretation, including Roentgen studies of the child and the young adult. Second edition, with 1180 illustrations on 415 figures. Philadelphia W B Saunders Company 1947 343 p. illus. 26 cm. $6 75 1249

Contents (abridged) Electricity and roentgenology The dental roentgenogram and films used in dental roentgenography Factors in dental roentgenography The complete intra-oral roentgenographic survey—orientation of roentgenograms. Stereoscopic roentgenography Roentgenographic interpretation. Dental roentgenograms of the normal child. Differential diagnosis between anatomical landmarks and indications of pathological conditions. Anomalies and abnormal development. Growth phenomena. Hypoplasia. Dental caries. Periapical lesions. Root resorption. Periodontal disease. Fractures of the teeth and jaws and operative trauma. Osteomyelitis. Cysts and bone dysplasias of the jaws. Benign tumors of the jaws. Malignant tumors of the jaws Involvements of the maxillary sinus. The temporomandibular articulation. Localization of misplaced teeth, cysts, salivary calculi and foreign bodies. Bibliography Index.

Note. (1446) Intended for dental hygienists, students, and practitioners, this book deals in detail with the use of X-rays as diagnostic technique in dentistry Almost as much space is given to the illustrations as to the text. As would be expected large proportion of the illustrations are reproductions of roentgenograms, but some of them are photographs which show correct positioning of patients for the taking of X-rays. In the second edition material has been added on dysplasias and on tumors of the jaw Other changes in the text are comparatively minor About 140 new illustrations have been added.

MCCOY JAMES DAVID

Applied orthodontics. Sixth edition, thoroughly revised. Illustrated with 227 engravings and 4 plates. Philadelphia Lea & Febiger 1946 335 p illus 24 cm. $4.50 1250

Contents (abridged) The object and scope of orthodontics. The growth of the masticatory apparatus. Dental and oral anomalies. The etiology of dental and oral anomalies. Pre-treatment regulation. Appliances for the correction of dental and oral anomalies Elements of modern appliances. The operation of appliances. Orthodontic practice. Post-treatment regulation. Index.

Note An introduction to the basic principles and methods employed in the prevention and correction of dental and oral anomalies. The book is intended for use as college text and emphasis is placed on the practical problems of diagnosis and treatment. Considerable space is devoted to the etiology of abnormal conditions and to principles of growth and development, knowledge of which the author considers essential to correct diagnosis and treatment. Recent advances in the field have been incorporated into this new edition, and the number of illustrations, which form valuable feature of the text, has been increased by twenty-two.

McGEHEE WILLIAM HARPER OWEN, AND MELVIN W GREEN

Pharmacology and pharmacotherapeutics for dentists. Third edition. Philadelphia The Blakiston Company 1947 536 p. illus. 24 cm. $6.50 1251

Contents: Basic principles of pharmacology and prescription writing. Drugs used by the dentist chiefly for their local effects on the mouth and teeth. Local drugs altering the inflammatory process. Drugs acting locally on the gastro-intestinal tract. Drugs acting on sensory nerves. Drugs acting chiefly after internal administration. Drugs acting on the autonomic nervous system and drugs acting on muscles. The pharmacology of the metals, specifics, vitamins and hormones. Appendix. Therapeutic index. Subject index.

Note ([illegible]) A compact but comprehensive presentation. It is used as a text for students and as a reference book by practicing dentists. Properties, uses, dosages, and methods of application are given for a wide range of drugs and pharmaceuticals. The appendix includes a variety of useful information including a dental formulary and prescription guide. This edition embodies many revisions and considerable new material, including revised treatments of the sulfonamide drugs and of the vitamins, and newly added material on the hormones and on penicillin and other antibiotics.

MEAD STERLING VERNON

Oral surgery Third edition With 805 text illustrations and 16 color plates. St. Louis The C V Mosby Company 1946 1448 p illus. (part col d) 26 cm. $15.00 1252

Contents (abridged) Diagnosis. Surgical anatomic relationships of the mouth. Preoperative preparation. Selection of anesthesia. Emergency measures. Surgical technic. Special drugs for surgery of the mouth. Sterilization for surgery of the mouth. Inflammation. Surgical bacteriology. Nonspecific infections. Specific infectious diseases. Wounds and injuries. Pericapical diseases of the teeth. Surgical treatment of periodontal diseases, by O. Kirkland. Removal of teeth. Removal of foreign bodies. Surgical preparation of the oral tissues for restorations. Surgical correction of abnormal frenum labia. Plantation of teeth. Fractures in general. The temperomandibular joint and muscles of mastication. Diseases of the maxillary bones. Malocclusion, deformities and malrelation of the jaws. Diseases of the salivary glands and their ducts. Diseases of the nerves. Diseases of the lips and cheeks. Diseases of the tongue. Hemorrhage. Syncope, shock, and collapse. Harelip and cleft palate, by M. N. Federspiel. Correlation of surgery and prosthesis in oro-facial deformities, by J. J. Fitz-Gibbon. Tumors. Cysts. Physiotherapy. Postoperative treatment. Diet and nutrition. Index.

Note ([illegible]) Although designed primarily as a text for the instruction of undergraduate dental students, this volume will be of value as a practical guide to the dental practitioner. Emphasis is placed on the relatively simple and everyday procedures, as drawn from the author's experience, and spectacular techniques are given minimal attention. In this edition some descriptions of procedures and methods of diagnosis have been condensed while others, such as that on anesthesia, have been expanded. Improvements resulting from war experience have been incorporated into the text, and new chapters added on chemotherapy and the correlation of surgery and prosthesis. Minor revisions have been made in the chapter bibliographies.

MERRITT, ARTHUR HASTINGS

Periodontal diseases and soft tissue lesions of the oral cavity diagnosis and treatment. Third edition. New York The Macmillan Company 1945 256 p illus. 21 cm. $3 75 1253

Contents (abridged) Part one: Introduction. Nomenclature. The classification of periodontal diseases. Differential diagnosis. Gingivitis. Vincent's infection. Etiology of periodontoclasia. Treatment of periodontoclasia. Periodontal abscess. Oral prophylaxis. The prevention of periodontal disease. Diet. Sensitive teeth. Splinting teeth. Tobacco smoking—its relation to the soft tissues of the mouth. Part two: Soft tissue lesions of the oral cavity—histopathology—examination—pigmentation. Soft tissue lesions of the oral cavity caused by environment. Soft tissue lesions of the oral cavity due to infection. Soft tissue lesions of the oral cavity associated with blood dyscrasias. Soft tissue lesions of the oral cavity of unknown etiology—lichen planus—pemphigus—cancer. Index.

Note ([illegible]) An outline of the branch of dentistry devoted to the study, prevention, and treatment of diseases which affect the supporting tissues of the teeth. Although the first two editions were intended for students and general practitioners of dentistry rather than specialists in periodontia, the newly added second part of the present edition is of interest to specialists as well. The first part of the book has been rather extensively revised. There are fifty-three illustrations.

MILLER, SAMUEL CHARLES AND OTHERS

Oral diagnosis and treatment a textbook for students and practitioners of dentistry and medicine. With an introduction by Allen T Newman. Second edition. 574 illustrations in black and white and 39 color plates Philadelphia The Blakiston Company 1946 903 p. illus (part col'd) 24 cm. $10 00 1254

Contents (abridged) The science of oral diagnosis, by S. C. Miller. Diseases of the mouth and mucosa in children, by L. M. Kaplan. Diseases of the oral mucous membranes exclusive of neoplasms, by G. M. MacKee and A. C. Cipollaro. Roentgenographic interpretation, by L. M. Ennis. Diagnosis of the abnormalities of the temporomandibular articulation, by S. E. Riesner. Surgical conditions of the mouth, by Theodor Blum. Diagnosis of incipient periodontal disease, by H. K. Box and J. L. Blum. Rationale of treatment for periodontal disease, by S. C. Miller. Pulp testing and diagnosis of pulp abnormalities, by A. Walker and M. Hyman. Lesions of the hard structures of the teeth and their treatment, by F. J. Bremner. Partial denture design and planning, by C. H. Schuyler. Diagnosis for full dental prosthesis, by J. S. Landa. Diagnosis in orthodontics, by S. Brodsky. Tumors of the oral mucous membrane, by G. M. MacKee and A. C. Cipollaro. Mouth infections and their relation to systemic disease, by H. S. Vaughan and L. R. Bernstein. Diagnosis and treatment of diseases of the salivary glands, by A. J. Barsky. Oral manifestation of endocrine dysfunctions, by W. Wolf. Oral and dental diseases of occupational origin, by J. A. Salzmann. Aerodontia (aviation dentistry) by J. M. Mullen. Bacteriology of the oral cavity by D. C. Lyons. Index of proper names. Subject index.

Note ([illegible]) This composite volume, written by a group of specialists, presents a systematized procedure for the diagnosis and treatment of oral diseases. Although dental problems and procedures are emphasized, the book, as the title indicates, will also be of value to physicians. This edition includes new chapters on neoplastic diseases of the salivary gland, roentgenographic interpretation, the latest techniques for extra-oral fixation of mandibular fractures, and rewriting of the chapters on stationary bridgework and bacteriology by subject specialists. These additions and other changes account for two hundred sixty extra pages. An author index to the extensive chapter bibliographies is included.

MOULTON FOREST RAY editor

Dental caries and fluorine. Organized and presented by Subsection on Dentistry A. A. A. S Thomas J Hill, chairman Washington American Association for the Advancement of Science, 1946 111 p illus. 26 cm. $3.50 1255

Contents Some general epidemiological considerations, by H. T. Dean. Epidemiological studies in the United States, by H. T. Dean. Epidemiological studies in the British Isles and India, by R. Weaver. Fluorine and dental caries in South Africa, by T. Osborn. Epidemiological aspects of oral lactobacillus counts in fluoride and non-fluoride areas, by P. Jay and F. A. Arnold, Jr. Chemical differences of caries susceptible and immune teeth and a consideration of food sources of fluorine, by W. D. Armstrong. Experimental caries and discussion of the mechanism of caries inhibition by fluorine, by H. C. Hodge and R. F. Sognnaes. Nondental physiological effects of trace quantities of fluorine, by F. J. McClure. Topical application of fluorine as a method of combating dental caries, by B. G. Bibby. The possibility of reducing dental caries by increasing fluoride ingestion, by F. A. Arnold, Jr. Fluorine and the public water supply by A. Wolman.

Note ([illegible]) The problem of dental fluorosis has been discussed at two symposia held under the auspices of the American Association for the Advancement of Science. Papers presented at the first meeting in 1941 were published under the title of *Fluorine and dental health*. This volume, a compilation of papers presented at the 1944 meeting, provides a review of some important and later investigations carried out in the United States and other parts of the world. Each paper has been prepared by a specialist in the field, and each includes a list of references.

NEVIN MENDEL, AND OTHERS

Conduction infiltration and general anesthesia in dentistry by Mendel Nevin and P G Puterbaugh. Collaborators Fred R. Adams and Hillard R. Nevin. Fifth edition revised. Illustrated with 228 engravings and large trigeminal nerve chart. Brooklyn N Y Dental Items of Interest Publishing Co Inc., 1948 428 p illus 25 cm. (Modern dentistry series) $7.50 1256

Contents (abridged) Conduction and infiltration anesthesia. Important anatomical structures and landmarks. The trigeminal nerve as related to dental surgery. Blocking the maxillary nerve and its branches. Pterygomandibular anesthesia. Infiltration anesthesia. Pharmacology of drugs used in local anesthesia. Preparation of the anesthetic solution from tablets. The physiology of local anesthesia. Local anesthesia with penicillin. Preoperative and postoperative treatment of patients. Restorative measures. General anesthesia and analgesia. Indications and methods of administration. General anesthesia in the dental office. General anesthesia in the hospital. Bibliography. Index.

Note (1696) A text and reference book for dental students and practitioners wherein are described the safest and most generally approved techniques and methods of administering local anesthetics. Each phase of the subject is fully illustrated with diagrams and photographs, and the anatomical structures encountered in nerve blocking are described in detail. A much briefer account of the methods employed in general anesthesia is included. This edition is fundamentally the same as the 1938 revision; however new techniques, such as co-medication, and new equipment, such as the aspirating syringe, are now described. A chapter on local anesthesia with penicillin has been added and the sections dealing with complications, postoperative treatment, pharmacology of drugs, and restorative measures have been revised and expanded. Some new references have been added to the bibliography

PRINZ, HERMANN AND U GARFIELD RICKERT

Pharmacology and dental therapeutics, a textbook for students and practitioners. Ninth edition rewritten and revised by Edward C. Dobbs St. Louis The C V Mosby Company 1945 567 p illus 22 cm. $7 50 1257

Contents (abridged) Introduction to pharmacology and dental therapeutics. Drugs which depress the central nervous system. Drugs which act on the central nervous system. Drugs which act on the autonomic nervous system. Local anesthetics. Drugs which act on the respiratory system. Drugs which act on the circulatory system. Drugs which affect the blood. Drugs which act on the gastro-intestinal system. Drugs which affect the genitourinary system. Drugs which act on the skin and mucous membranes. Chemotherapy. Cutaneous tests, antitoxins, and vaccine therapy. Physical therapeutics. Dental therapeutics. Prescription writing. Coloring, flavoring, and sweetening agents. Antiseptics. Astringents. Irritants and counterirritants. Caustics. Dietary factors. Dental therapeutics. Index.

Note A standard textbook and reference manual in which pharmacology is treated from the viewpoint of dentistry. The treatment is both comprehensive and detailed. Many subjects and drugs are discussed which are not used directly in dentistry but are useful for background knowledge and full treatment is given to those topics and drugs that are directly used. Many formulas are given for dental preparations. The first edition was published in 1909 and successive editions up to the eighth were entitled *Dental materia medica and therapeutics*. The new title was adopted to indicate shift in emphasis to pharmacodynamics. In the present edition the book has been still further revised and has been rearranged so that the drugs are now considered under their chief sites of action. The revisions have brought the work into conformity with *Accepted dental remedies* (1944) the *United States Pharmacopoeia* XII and other similar standard compilations.

SCHLOSSER RUDOLPH OSCAR

Complete denture prosthesis. Second edition with 288 illustrations Philadelphia W B Saunders Company, 1946 466 p illus. 24 cm $6 75 1258

Contents (abridged): The objectives of complete denture prosthesis. Oral anatomy and physiology and their relation to body metabolism. The masticatory mechanism. Case history examination of the mouth, diagnosis and prognosis. Preliminary impressions and study casts. Teeth selection. Individually prepared impression trays. A comparison of some of the impression materials commonly used in complete denture prosthesis. Anatomical and physiological factors of special importance in the taking of impressions for complete denture prosthesis. Casts, baseplates, mounting casts and occlusion contour. The denture space and its relation to the restoration of lost facial dimension and contour in compliance with the esthetic and physiological requirements. Arranging the teeth for complete denture prosthesis in compliance with the esthetic and functional requirements. Trying in the wax model dentures. Perfecting the articulation of the teeth and converting the wax models into finished dentures. Checking the fit of the completed dentures and establishing the occlusal balance preparatory to final insertion. Maintenance and corrections of dentures. Immediate denture prosthesis. Complete denture prosthesis for anomalies of jaw form and relation. Index.

Note (1702) A comprehensive and practical manual which is suitable for use both by undergraduate students of dentistry and by dental practitioners. The importance of thorough understanding of mandibular movement is stressed. The materials used in dentures and all the techniques of impression taking, articulating, and fitting are thoroughly covered from the standpoint of practicing dentists. In the new edition the work is not basically changed but it has been revised and amplified considerably and is now about seventy-five pages longer. Most of the changes were made in order to incorporate in the book descriptions of new methods and new materials. There are few additional illustrations, and the short lists of references cited and supplementary readings at the ends of chapters have been revised. The author is Professor of Prosthetic Dentistry in the Dental School of Northwestern University

SELDIN HARRY MENDEL

Practical anesthesia for dental and oral surgery, local and general. Third edition, thoroughly revised with 238 illustrations. Philadelphia Lea & Febiger 1947 562 p. illus. 24 cm $8 50 1259

Contents (abridged) Anatomical basis for local anesthesia. Anesthetic solutions. Field block or infiltration anesthesia of the maxilla and the mandible. Intraoral block anesthesia of the mandible. Extraoral block anesthesia of the maxilla and mandible. Operative dentistry and pulp canal therapy. Complications of local anesthesia and their treatment. Part II, General anesthesia. The selection of anesthetics for oral operations. Practical physical diagnosis for the dental anesthetist. The physiology of inhalation anesthesia. Armamentarium. The administration of nitrous oxide and its mixtures. Analgesia. The management of the recalcitrant patient. Anoxemia in anesthesia. Ethylene. Cyclopropane. Divinyl ether or vinethene. Ethyl chloride. Intravenous anesthesia. Resuscitation. Index.

Note (1707) In this volume the author has made a special effort to include material which will be of practical value to the dental surgeon. Detailed descriptions of the techniques utilized in administering local and general anesthetics are accompanied by many excellent diagrams and photographs of cadaver dissections. Each type of operation is preceded by brief review of the anatomy of the area under consideration. This edition has been revised to incorporate the latest knowledge in the field of anesthesiology. The section on general anesthesia and those chapters which discuss the administration and effects of nitrous oxide have been thoroughly revised. Other changes have been made in the chapters dealing with pentothal sodium and the application of local anesthesia in operative dentistry and root canal therapy

SIMPSON, CLARENCE OLIVER

Advanced radiodontic interpretation. Third edition. With one hundred fifty illustrations on ten plates St. Louis The C V Mosby Company 1947 78 p illus 29 cm $10.00. 1260

Contents Technical factors. A general radiodontic examination. Maxillary anatomic variations. Mandibular anatomic variations. Anomalies of dentition. Bone types and neoplastic abnormalities. Pathologic processes and reactions. Extraoral views of dentition and cysts. Mandibular cyst, necrosis and fractures. Mandibular fracture and dislocation, and maxillary sinuses. Bone peculiarities and traumatic osteosclerosis. Caries and periodontal lesions. Periapical disease.

Note. A collection of reproductions of radiographs designed to provide the dental practitioner with experience in radiodontic interpretation which he could not obtain in the average dental practice. Each group of illustrations and each X-ray is accompanied by brief discussion of the special features to be noted if the plate is to be accurately interpreted. In this edition the photographic films which were used in the previous editions have been replaced by excellent half-tone illustrations. The last three groups of plates are new

SKINNER, EUGENE WILLIAM

The science of dental materials. Third edition, revised. Philadelphia W B Saunders Company 1946 410 p. illus. 24 cm. $5 75 1261

Contents (abridged) Physical properties of dental materials. Plaster of paris. Uses and manipulation of dental plasters. Impression compound. Hydrocolloidal impression materials. Denture base materials. The use of acrylic resins for denture bases. Abrasives and polishing agents. Dental porcelain. Dental cements. Introduction to the science of metals. Physical phenomena of grain structure. Gold foil and its manipulation. Types of alloys and their constitution. Corrosion of metals and alloys. Dental wrought gold alloys. Dental casting gold alloys. Inlay casting wax. Dental inlay casting investments. Dental casting procedure. The joining of metals. Dental amalgam alloys. The restoration of teeth with acrylic resins. Steel. Stainless steel. Miscellaneous manipulations of steel in dentistry Technic metals and alloys. Gutta-percha. Appendix. Index.

Note: (7708) Although primarily textbook for dental students, this book has practical value also for dental technicians and graduate dentists as well. It describes the sources, composition, and properties of materials used in dentistry, and explains the scientific principles that underly their uses. Casting and other manipulative techniques are discussed thoroughly from the viewpoint of the chemistry and physics involved. In addition to the text proper many fundamental data are presented in tabular form. The most significant change in the work in this edition is the rewriting of the three chapters on acrylic resins. There are new 72 tables and 175 illustrations.

SWENSON MERRILL GUSTAF

Complete dentures. Second edition. Eight hundred eighty two illustrations ten in color St. Louis The C. V Mosby Company 1947 726 p illus. (part col'd) 25 cm. $12.50 1262

Contents (abridged) Part I, Related factors of complete denture construction Anatomy and physiology in relation to denture construction. Underlying principles and fundamentals of impression making. Vertical dimension. Methods of securing centric and protrusive relation. Arrangement of teeth. Occlusion. Face-bow Articulators. Surgery in relation to complete dentures. Selection of teeth. Part II, Construction of complete dentures: Preliminary maxillary impression. Preliminary mandibular impression. Zinc oxide-eugenol paste impressions Mounting records. Mounting the casts on the articulator by means of face-bow and centric records The setup Fast dam, check of esthetics. Waxing, flasking, and processing. Remounting finished dentures. Part III Immediate denture construction Indications, advantages, and disadvantages Impressions. Boxing, flowing of the cast, separation of the cast. Construction of bite rims, centric relation, face-bow and mounting. Setting of the teeth. Surgery and insertion of denture. Perfection of occlusion. Rebasing, duplicating, and subsequent service for immediate dentures. Part IV Supplemental procedures and materials Repair and duplication of complete dentures—duplication of casts. All-compound preliminary impressions. Other immediate impression methods. Part Single maxillary dentures and rebasing. Rebasing complete dentures. Complete maxillary denture opposing partial mandibular denture. Wax extension as applied to extremely resorbed maxillary and mandibular ridges. Complete maxillary denture against natural mandibular teeth. Bibliography Index.

Note: (7709) A clear and detailed description of the procedures and techniques to be followed in construction of various types of dental prostheses. The volume is intended to serve as practical manual for students and dental mechanics, and as in the previous edition fundamental principles and related topics are discussed separately from the technical sequences. The textual material is closely integrated with the hundreds of excellent photographs and diagrams. The vulcanites, now largely supplanted by the acrylic resins, are no longer mentioned in this edition. A section on analysis of occlusal disharmony has been added and other chapters dealing with anatomy denture stability and hinge axis movement of the mandible have been revised by specialists in the field. The eighteen-page bibliography includes material published during the past twenty-five years.

THOMA, KURT HERMANN

Oral surgery With 1631 illustrations including 121 in color St. Louis The C. V Mosby Company 1948 2 v illus. (part col d) 25 cm. $30.00 1263

Contents. Volume I, The principles of surgery The general care of the patient. Dentoalveolar surgery The treatment of traumatic diseases of the jaws. The treatment of odontogenic diseases of the maxillary sinus. The treatment of osteomyelitis and necrosis of the jaws. Volume The treatment of diseases of the mandibular joint. Infections of the face and neck. Diseases of the salivary and mucous glands. Diseases of the fifth and seventh nerves. The treatment of cysts of the jaw The treatment of benign tumors of the mouth and jaw. The treatment of malignant tumors. Surgical treatment of deformities of the jaw Index.

Note: An exhaustive treatise, written specifically for the general practitioner of dentistry and medicine. It provides detailed description of surgical techniques used in the correction of diseases, injuries, and abnormalities of the oral cavity teeth, jaw and adjacent structures. Considerable attention is also given to pre- and postoperative care of the patient. Each volume is profusely illustrated and numerous case histories are cited. The work is planned for use in conjunction with the author's *Oral pathology*, St. Louis: C. V Mosby Co 1944 $15.00, which deals with the etiology pathogenesis, anatomy and histology of the oral tissues.

TYLMAN STANLEY DANIEL

Theory and practice of crown and bridge prosthesis. Second edition. With 1273 text illustrations and 9 color plates St. Louis The C. V Mosby Company 1947 960 p. illus. (part col d) 25 cm. $12.50 1264

Contents (abridged) History of fixed partial prostheses. Examination of patients. Facial factors The maxillae and mandible. Planning the fixed partial denture. Oral anatomy and oral physiology in relation to crowns and fixed partial denture prosthesis. Histological structure of teeth and supporting tissues in relation to crown and fixed partial denture prosthesis. Some physical and engineering principles related to crown and fixed partial denture prosthesis. A biological interpretation of physical and mechanical principles. Classification and types of fixed partial dentures Special problems and precautionary measures in the preparation of teeth for crowns and retainers The construction of intracoronal and extracoronal retainers. The construction of complete veneer porcelain crowns. The construction of pontics for fixed partial dentures. The installation, testing, and adjustment of fixed partial dentures. The removal and repair of crowns and fixed partial dentures. The use of acrylic resins in crowns and fixed partial dentures. Color reproduction in synthetic resins. Oral rehabilitation. Index.

Note. (7711) The purpose of this comprehensive work is to provide text for the student and practical reference book for the dental practitioner Detailed descriptions of the processes and techniques involved in the construction of crowns and fixed partial dentures are accompanied by numerous step-by-step drawings and photographs. Emphasis is placed on the importance of an analysis of the need for bridge and crown work, and the preferable and economical manner to render this service. This edition includes new section on the mechanical principles of fixed bridge design, the linear hydrocolloid technique for bridge construction by the indirect method, four new chapters on the uses of acrylic resins in crown and bridge prosthesis, and chapter on oral rehabilitation. A few additions have been made in the chapter bibliographies.

TYLMAN STANLEY DANIEL, AND FLOYD A. PEYTON

Acrylics and other synthetic resins used in dentistry Philadelphia J B Lippincott Company 1946 480 p illus. (part col d) 24 cm. $10 00 1265

Contents Part I, Synthetic dental resins and related materials—their chemical and physical nature by F A. Peyton Historical development of dental resins. The newer materials for dental prostheses. Plasticizers, catalysts, pigments, and opacifiers for dental resins. Processing dental resins Physical and clinical characteristics of dental resins. Accessory materials for resin restorations. Part II, Clinical applications of synthetic resins; by S. D. Tylman The acrylic inlay Color—its perception and reproduction in synthetic resin. Acrylic-resin crowns. Fixed bridges. Complete dentures. Rebli-

and resins—technic for their use in complete denture. Removable partial-denture prosthesis. Acrylic-resin repairs and replacements. Obturators for cleft palates. Acrylic-resin splints. Somatoprosthesis: The artificial ear. The artificial acrylic eye. The artificial acrylic nose. Other parts of the body Index.

Note A description and appraisal of the properties and uses of acrylic resins in prosthesis. Applications of acrylics for artificial restoration of not only teeth but other parts of the body such as the face, hands, and breast are covered. Information is also included on older materials and on other resins. Numerous photographs and diagrams support and clarify the text. The extensive lists of references at the end of each chapter form valuable part of the book and provide the reader with survey of the available literature, most of which is still uncollected and of recent origin. The book is designed chiefly for practicing dentists and dental laboratory technicians.

UNITED STATES ARMY INSTITUTE OF PATHOLOGY

Atlas of dental and oral pathology prepared at The Army Institute of Pathology from material in The Registry of Dental and Oral Pathology of The American Dental Association by Joseph L. Bernier and J E Ash. Fourth edition, a complete revision and rewriting of the previous editions of James B Mann and Henry M. Goldman. 484 illustrations, 150 plates. Washington D C American Registry of Pathology 1948 230 p illus. 28 cm. $7.00 1266

Contents: Embryology and histology Pathology of the hard dental structures. Pathology of the soft dental structures. Odontogenic tumors. *Odontogenic cysts. Hypertrophic, trophic and inflammatory* lesions. Oral lesions of specific etiology Benign oral tumors Malignant ectodermal tumors Malignant mesenchymal tumors. Index.

Note (1664) In the present edition this well-known book has been completely reorganized and rewritten. The case method of organization, employed in earlier editions has been abandoned. The text is now organized into chapters as indicated above. There are now 484 figures, and practically all of them are reproductions of photographs and microphotographs which illustrate wide range of pathological conditions of the oral cavity and the surrounding tissues. Among the new features of this edition are the new format, the new text, and added plates on radiation effects.

WEINBERGER, BERNHARD WOLF

An introduction to the history of dentistry with medical & dental chronology & bibliographic data. St. Louis The C. V Mosby Company 1948 2 v 26 cm. $20.00 1267

Contents (abridged) Volume Introduction. First period, Antiquity The teeth of prehistoric man and his descendants. Mesopotamian and Oriental dentistry Ancient Egyptian medicine and dentistry The dentistry of the people of Israel. The dental art of the Phoenicians, 6th century B. C. The golden age of Roman dentistry Decorations and mutilations of teeth. Second period, Arabian, medieval and period of Renaissance reformation. Dentistry during the Middle Ages. Barber-surgeons, barbers and blacksmiths—not dentists. Dentistry in the Renaissance—the revival of anatomy and physiology Third period, Dentistry as an independent profession. The dawn of dental literature. The advent of scientific dentistry Dentistry during the eighteenth century Chronological table. General works of reference. Dental literature, 1530–1800. Bibliographies and biographies. Index of personal names Subject index. Volume II. The first one hundred years of dentistry in America. Dentists and dentistry in America during the colonial period (1734–1800) John Baker M D (1732–1796). Robert Woofendale (1742–1828) Paul Revere (1735–1818) Isaac Greenwood, Sr of Boston (1730–1803) James (Jacques) Gardette (1756–1831) Isaac Greenwood, Jr. (1758–1829) Jean Pierre (John Peter) Le Mayeur M.D., in America (1781–1806) Josiah Flagg (1763–1816) John Greenwood, pioneer American dental scientist (1760–1819) Richard Cort[lan]d Skinner. Charles Willson Peale (1741 1827) George Washington. General works of reference. Index of personal names. Subject index.

Note. A valuable, though rather poorly organized, reference history which has obviously been based on extended research. A number of quotations from early works, advertisements, etc. are incorporated in the text. There are numerous illustrations of not only documents but dentures. The author does not minimize the significance of the roles played by artisans, untutored "tooth-drawers and quacks; at the same time he presents strong case for his claim that dentistry has always been specialized branch of medicine and that the really guiding spirits of the profession have been medical scientists. In addition to bibliographies attached to each chapter, there are several general reference lists and historical bibliographies in both volumes. There is also fairly detailed chronological table.

WINTER, LEO

Operative oral surgery Third edition. *With 1240 text illustrations, including 16 in* color St. Louis The C V Mosby Company 1947 1167 p illus. (part col'd) 26 cm. $15 00 1268

Contents: Introduction to oral surgery Armamentarium and its care. Preoperative considerations. Sutures and ligatures. Local anesthesia. General anesthesia for oral surgery operations Chemotherapy Accidents following local anesthesia. Exodontia. Pain. Postoperative considerations. Differential diagnosis and treatment of infections of the face and neck. Affections of the floor of the mouth. Oral manifestations of the blood dyscrasias. Vitamins. Diseases of the mouth. Cysts f the jaws. Adamantinoma. Neoplasms in the oral cavity. Surgery in relation to the maxillary sinus. Surgical preparation of the mouth for denture prosthesis. Surgical correction of pyorrhea alveolaris. Fractures. Osteomyelitis. Conditions of the temporomandibular articulation. Surgical treatment of prognathism and orthognathous mandibles. *References.*

Note. (2713) This comprehensive text for students includes some of the material, in slightly altered form, presented in the author's briefer *Textbook* / *exodontia*, St. Louis, 1943 (2714) Only those operative measures are described which experience has proved to be of special value. In this edition war surgery as such has been eliminated, but advances due to war experiences which are of value in civilian practice have been incorporated into the text. The entire subject of fractures has been enlarged to include new clinical data, information on metals such as tantalum for implants, and skeletal fixation. The material on chemotherapy has been revised, and new chapters added on cancer vitamins, and maxillary sinus. As in the previous edition the hundreds of anatomical drawings, roentgenograms, and photographs constitute valuable feature of the book. A six-page bibliography is included.

YEAR BOOK OF DENTISTRY

The 1947 Year book of dentistry edited by Lester Cahn, George W Wilson Carl W Waldron Stanley D Tylman, George R. Moore. Howard C. Miller, consulting editor Chicago Year Book Publishers Inc., 1948 704 p illus. 19 cm. (The practical medicine year books) $5.00 1269

Contents (abridged) Signs and symptoms of intraoral cancer by L. R. Cahn. Part I, Oral pathology and oral medicine. Part II, Operative dentistry Part III, Oral surgery Part IV Prosthetic dentistry Part Orthodontics. Index Index to authors.

Note (2715) This book is an issue of an annual series which digests the important literature published each year in the principal countries of the world, including the United States. The abstracts are in English, and in many cases are accompanied by brief supplementary note by one of the editors, pointing out the significance of the paper abstracted. Citations to the original publications are given in footnotes. A generous number of illustrations is included.

INDUSTRIAL MEDICINE

BELLINGHAM, ELLEN F , AND OTHERS compilers

Bibliography of industrial hygiene 1900–1943 a selected list. Compiled by Ellen F Bellingham, J J Bloomfield, and Waldemar C Dreessen. From the Industrial Hygiene Division, Bureau of State Services. Prepared by direction of the Surgeon General. Washington D C. Government Printing Office, 1945 95 p. 23 cm. (United States Public Health Service. Public health bulletin no 289) Paper $0 20 1270

Contents: Introduction. Abbreviations. Part I, General sources of information Reference volumes. Periodicals. Some sources of pamphlets. A selected list of correspondents and reference sources. Part II, Specific sources of information Absenteeism and morbidity Accidents. Air-borne infection, control. Air conditioning. Asthma. Aviation medicine. Communicable diseases. Compressed air and diminished pressure. Dermatoses Dust. Electrical industries. Eyes. Fatigue. First aid. Hazardous substances. Health education. Heating. Hours of work. Illumination. Industrial hygiene (general) Industrial hygiene surveys. Industrial medical services. Industrial relations. Insurance and prepayment medical plans. Legislation. Metal fume fever Mining. Mortality Music. Noise. Nutrition. Older workers. Personal protective equipment. Psychophysiology Recreation Rehabilitation and job placement. Respiratory diseases. Sanitation. Statistical methods. Statistics. Temperature extremes. Toxic agents. Tuberculosis. Venereal diseases. Ventilation. Warning agents Women in industry Writing.

Note: This bibliography of writings in English on industrial hygiene is arranged under broad subject groupings by authors' names. For each entry is given author title, publisher paging, date, and for most books and separate pamphlets in print the price. Included are books, pamphlets, government publications, and journal articles. Items considered as of particular importance are marked with an asterisk. The bibliography was compiled in response to requests from industrial hygienists, governmental health and labor departments, physicians and others for "a list of materials on industrial hygiene."

COMMITTEE ON TUBERCULOSIS IN INDUSTRY OF THE NATIONAL TUBERCULOSIS ASSOCIATION AND AMERICAN TRUDEAU SOCIETY

Industry tuberculosis silicosis and compensation. Edited by Leroy U Gardner A symposium current papers for physicians and administrators interested in industrial medicine and workmen s compensation. New York National Tuberculosis Association, 1945 126 p. illus. 23 cm. U.S $2.00 foreign countries, $2.25 1271

Contents: Part I, Tuberculosis: Tuberculosis and industry by W P Shepard. Conquest of tuberculosis in industry by H. E Hilleboe and D M. Gould. The attitude of industry toward X-ray examinations of the chest, by C. D Selby Control of tuberculosis in an industrial group, by A. C. Reid. Part II, Pneumoconioses Review of silicosis for the industrial hygienist and medical practitioner by L. E. Hamlin. The respiratory hazards of electric arc welding, by O. A Sander. Elements of diagnosis and prognosis in pneumoconiosis, by L. U. Gardner. Management of the silicotic patient, by P J. Bamberger. Aluminum therapy in the prevention and treatment of silicosis, by A. J Lanza. Part III, Compensation Medical aspects of compensation for partial disability from silicosis, by G. W Wright. Occupational diseases—the physician and the law by L. Brandy Occupational disease liabilities—financial and bookkeeping, by R. E. Kuechle. Index.

Note. Taken as a whole, the papers in this volume provide brief review of the various steps which management and industry have taken in recent years to combat tuberculosis and silicosis. The physiological aspects of these diseases are discussed, but attention is directed primarily toward the X-ray examination of workers and methods of treatment when tuberculosis or silicosis is discovered. The majority of the papers were prepared by medical directors or consultants of large industrial corporations.

DREESSEN WALDEMAR CLAUS AND OTHERS

Health of arc welders in steel ship construction a survey made in cooperation with United States Maritime Commission and United States Navy by Waldemar C. Dreessen Hugh P Brinton, Robert G Keenan, Thalbert R. Thomas Edwin H. Place, and James E. Fuller From Industrial Hygiene Division, Bureau of State Services. Prepared by direction of the Surgeon General. Washington D C. Government Printing Office, 1947 200 p illus. 23 cm. (United States Public Health Service. Public health bulletin no 298) Paper $0.55 1272

Contents: Introduction Origin and nature of the study Ship construction. The arc welding process. Ventilation in shipbuilding. Medical reports on the relation of welding to health. Procedure Medical. Environmental. Statistical. Chemical investigation of welding fumes. Particulate constituents Oxides of nitrogen. Characteristics of the group studied. Past medical history: Previous illnesses. Menstrual history Physical examination findings: Weight. Visual acuity Skin. Eyes, ears, nose, and throat. Lung-field markings in chest X-ray films. Selected case histories. Calcified pulmonary lesions Pulmonary tuberculosis. Cardiovascular diseases. Blood pressure findings. Physical handicaps, deformities, and other abnormalities. Laboratory findings: Hematology Urinalyses Blood test for syphilis. Discussion and conclusions. Summary Bibliography Appendix: Statistical tables

Note The clinical and environmental findings of an investigation into the respiratory health hazards of shipyard arc welders working with coated electrodes on bare steel or galvanized steel are presented in this bulletin The investigation, instituted by the U S. Maritime Commission, was conducted cooperatively by the United States Navy the Maritime Commission, and the Public Health Service. Physical examinations were made of 2930 men and 1700 women employed in seven shipyards Full details of the findings, by age groups, sex, and color are presented in text, tables, and charts. The immediate reason for the investigation was the increasing number of complaints of respiratory symptoms from shipyard workers.

HAMILTON ALICE, AND RUTHERFORD T JOHNSTONE

Industrial toxicology Edited by Henry A. Christian. Reprinted from Oxford loose-leaf medicine with the same page numbers as in that work. New York Oxford University Press 1945 69 p. 24 cm. (Oxford medical publications) $2.50 1273

Contents (abridged) Part I, Pathology and diagnosis. Part II, Treatment and prevention. Part III, Bibliography

Note: A concise tabulation of various organic and inorganic substances which are responsible for poisoning in industrial plants and

factories. In Part each substance is discussed on the basis of its industrial use, its mode of entry into the body the degree of toxicity and its effect on the human body Part II outlines the specific therapy for each substance and preventive measures. The book is intended for the use of plant physicians and the general practitioner It is based on survey of the literature of the subject, and the references cited throughout the text are keyed to twenty-six page bibliography

HOFF EBBE CURTIS

A bibliographical sourcebook of compressed air diving and submarine medicine Research Division, *Project X-427 Bureau of Medicine and Surgery* Navy Department, Washington D C Washington D C Government Printing Office, 1948 382 p 27 cm. (United States Department of the Navy Bureau of Medicine and Surgery Navmed 1191) $2 50 1274

Contents: Preface. History of the medical aspects of submarines, diving, and subaqueous tunneling Technical procedures and research apparatus in compressed air diving, and submarine medicine. Special anatomy physiology and biochemistry of compressed air diving, and submarine medicine. Biology of very high hydrostatic pressures Microbiology Immunology and embryology Effects of high pressures on plant growth Diseases and accidents in submarine personnel, divers, and compressed air workers. Selection, assessment of efficiency and training of submarine personnel, divers, and compressed air workers Protection of personnel. Therapeutic effects of gases under raised atmospheric pressures and respiration of compressed and rarefied air Human factors in design and operation of submarine instruments and controls submarine illumination. Medicolegal aspects of compressed air work Key to abbreviations of journals and handbooks cited. Index of authors. Index of subjects.

Note. An annotated guide to the existing literature in all languages in the field of submarine medicine A total of 2958 books and articles are listed in subject arrangement. Each group of references preceded by review or summary of the literature listed, the findings and point of view of the investigators being reported briefly The volume is thus review of the literature as well as bibliography of the subject

HOUGH J WALTER, AND OTHERS

Health of workers exposed to sodium fluoride at open hearth furnaces. Prepared by direction of the Surgeon General by J Walter Hough, Dohrman H. Byers Vernon J Forney Hugh P Brinton Robert G Keenan Robert P Ralls Harold J Paulus. From Industrial Hygiene Division Bureau of State Services. Washington D C Government Printing Office 1948 64 p illus 23 cm. (United States Public Health Service. Public health bulletin no 299) Paper $0.25 1275

Contents Origin of study Environmental findings Open-hearth process for steel. Occupational analyses and descriptions. Instruments and methods. Results of study Characteristics of group studied Age distribution Birthplace. Marital status Personal habits Work experience Medical findings Introduction. Procedures. Dispensary visits Sick absences Previous illnesses History and symptoms Physical examinations X-ray interpretations Laboratory Summary of medical findings. Conclusions from medical findings Oral findings Introduction Clinical oral examinations General findings Specific findings Interpretation of findings Summary of oral findings Conclusions from oral findings Acknowledgments Appendix tables

Note The Industrial Hygiene Division of the U S Public Health Service conducted the investigation reported in this bulletin on the potential health hazards at open-hearth furnaces where sodium fluoride is used Environmental studies were made of air samples, dust samples, and control samples Medical examinations were made of 350 male workers in four Ohio steel plants, one of them using and one not using fluoride. The results are shown in detail in the report with conclusions and recommendations No significant physical defects could be directly related to the use of sodium fluoride.

JOHNSTONE, RUTHERFORD THOMPSON

Occupational medicine and industrial hygiene With one hundred seventeen illustrations seven in color St. Louis The C. V Mosby Company 1948 604 p illus (part col d) 25 cm. $10 00 1276

Contents (abridged) Part One, Tomorrow's doctors—the background and the future of industrial medicine. Industrial medicine and workmen's compensation. Functions of the industrial physician. The basic approach to diagnosis of occupational disease. Part Two, The industrial solvents The aliphatic hydrocarbons. The halogenated hydrocarbons The chlorinated hydrocarbons. Chlorinated naphthalenes and diphenyls. Halogens and halogen compounds. The aromatic hydrocarbons The oxides of nitrogen. DDT Part Three, The metals. Part Four The dusts: Silicosis. Anthracosilicosis. Asbestosis The inert dusts. Tuberculosis and pneumonia in industry The dermatoses Synthetics Special industrial processes. Industrial hygiene—general. Pre-employment examinations and the placement program. The chemicals in common trade-name products. Index.

Note. A practical text and reference tool written for students, medical educators, and others of the medical profession who are concerned with the working and living habits and conditions of the worker The book is conceived as contribution to the field of preventive medicine and in it the author combines discussions of the clinical aspects of occupational diseases with descriptions of industrial processes, their appraisal and control. The greater part of the volume deals with various dangerous chemicals and industrial substances, basic facts of exposure, pathology symptoms, treatment, and case histories. *Common trade-name products and their chemical* composition are listed in the appendix.

PATTY FRANK A editor

Industrial hygiene and toxicology Volume I. New York Interscience Publishers Inc., 1948 531 p illus 25 cm $10 00 1277

Contents Industrial hygiene—retrospect and prospect, by F A. Patty Industrial hygiene records and reports, by J. B Littlefield. The industrial hygiene survey and personnel, by F A. Patty Personal factors in competence and fatigue, by J Brozek. Environmental factors in fatigue and competence, by W N Witheridge. Physiological effects of abnormal atmospheric pressure, by H. Specht. The mode of entry and action of toxic materials, by F A. Patty Sampling and analysis of atmospheric contaminants, by F A. Patty. Radiant energy and radium, by L. F Curtiss. Ventilation, by W N. Witheridge. Occupational dermatoses, by L. Schwartz The visible marks of occupation and occupational diseases, by C. F McCord Fire and explosion hazards of combustible gases and vapors, by G W Jones Explosion and fire hazards of combustible dusts, by I Hartmann. Respirators and respiratory protective devices, by F A Patty Dust and its role in the causation of occupational disease, by E. E Dart Subject index.

Note A comprehensive survey of the philosophy, basic knowledge, and techniques of present-day industrial hygiene. Much information of permanent reference value is included. Each paper is prepared by specialist and is essentially résumé of the knowledge that is currently useful. Footnote references are given to pertinent literature, but comprehensive bibliographies have not been attempted. The work is addressed to active workers in the field, particularly to men in charge of safeguarding the health and welfare of workers in factories and other industrial establishments. The second volume will contain mainly papers on specific groups of hazardous chemicals.

SCHWARTZ LOUIS, AND OTHERS

Occupational diseases of the skin by Louis Schwartz Louis Tulipan and Samuel M Peck. Second edition thoroughly revised with 146 illustrations and a colored plate. Philadelphia Lea & Febiger 1947 964 p. illus (part col'd) 24 cm. $12.50 1278

Contents (abridged) Historical data. Compensation for occupational dermatoses Incidence of industrial skin diseases. Classification of causes of occupational dermatoses. Diagnosis of industrial skin diseases. General methods of treatment. General methods of prevention Methods of investigation of occupational diseases of the skin Dermatoses caused by physical and mechanical agents—inorganic acids and organic acids—alkalis—metals—chromic acid and the chromates—carbon, coal tar and coal tar products—petroleum. Dermatitis in synthetic dye manufacture. Dermatitis from wearing

apparel. Cosmetics. Electroplating. Dermatoses caused by explosives. Dermatoses caused by furs. Dermatoses from glass manufacture. Dermatoses caused by insecticides and fungicides. Dermatoses in leather manufacture. Dermatoses caused by paints, varnishes and lacquers. Dermatoses caused by resins and waxes. Dermatoses in the manufacture of rubber. Dermatoses caused by organic solvents. Sugar industry. Irritant plants and woods. Dermatoses caused by animal parasites. Dermatoses caused by bacterial infections. Occupational dermatoses from mycotic infections. Occupational cancer. Analysis of skin hazards in one hundred and fourteen occupations. Medico-legal aspects of occupational dermatitis. Chemicals which are known to be skin irritants. Index.

Note: This detailed and comprehensive work discusses dermatoses arising in industrial environments and also those resulting from the use of the products of industry by the consumer. The authors point out that skin affections are of more frequent occurrence than the total of all other industrial diseases. Despite somewhat technical language, the book is directed at a wide audience including plant physicians, employers, safety engineers, and insurance men. It is well illustrated, and contains extensive bibliographies and a glossary of known chemical skin irritants. This edition has been considerably revised and now includes information on many of the newer substances which have come into industrial use in recent years.

STERN, BERNHARD JOSEPH

Medicine in industry New York The Commonwealth Fund, 1946 209 p 21 cm. (New York Academy of Medicine. Committee on Medicine and the Changing Order Studies) $1.50 1279

Contents: Preface, by Paul Kornfeld. Scientific developments in industrial medicine. Social and legislative backgrounds. The extent of industrial disability. The handicapped worker in industry. Preventive services. Medical care and health insurance. The industrial physician. Appendix: Industrial prepayment medical plans for companies employing large medical staffs, 1943–44. Index.

Note: The historical development and the social and legislative backgrounds of medical care in industry are outlined concisely in the first two chapters of this work. The remainder of the volume is devoted chiefly to a study of the current situation in the United States. Facts are presented objectively and they show that, despite the advances of the last decades, provisions for the protection of workers are still inadequate and that the resultant economic loss is considerable. There are numerous statistical tables and full bibliographic references.

UNITED STATES COAL MINES ADMINISTRATION

A medical survey of the bituminous-coal industry A report of the Coal Mines Administration, Department of the Interior Washington D C. Government Printing Office, 1947 244 p illus. 29 cm. Paper $1 75 1280

Contents: Launching the survey. Housing and sanitary facilities. Public health. Industrial medicine. General medical services. Hospitalization. Hospital facilities. Off-the-job living. Recommendations. Bibliography. Appendix: Krug-Lewis agreement, 3 house leases, workmen's compensation benefits, list of survey personnel. Supplement: The coal miner and his family.

Note: Pursuant to an agreement made between the Secretary of the Interior and President of the United Mine Workers, May 29 1946, a survey and study was made of the hospital and medical facilities, medical treatment, and sanitary and housing conditions in the bituminous-coal-mining areas of the United States. The report of the survey is contained in this large-sized document illustrated with photographs. The report is "unique in that it represents the first nation-wide medical survey of an industry conducted under Government auspices." The 67-page supplement, entitled *The coal miner and his family*, contains an illustrated account of life in the bituminous-coal-mining areas.

PUBLIC HEALTH

AMERICAN PUBLIC HEALTH ASSOCIATION

The control of communicable diseases an official report of the American Public Health Association. Sixth edition. New York The American Public Health Association 1945 149 p 19 cm. Paper $0.35 1281

Note. In this pamphlet are given the recommended methods of control, together with related information, for diseases which are of interest to public health authorities. The general arrangement is alphabetical under common or widely accepted name of the disease. Under each disease its public health aspects are discussed under such headings as, recognition, etiologic agent, source of infection mode of transmission, incubation period, period of communicability susceptibility and immunity prevalence, and methods of control. In this edition the descriptions of diseases which may occur in the United Kingdom as well as in the United States of America have been written in collaboration with representatives of the British Ministry of Health Earlier editions of the work appeared in the *Public health reports*, published by the United States Public Health Service. A new edition is scheduled for publication in 1950.

AMERICAN PUBLIC HEALTH ASSOCIATION COMMITTEE ON ADMINISTRATIVE PRACTICE. SUBCOMMITTEE ON LOCAL HEALTH UNITS

Local health units for the nation a report by Haven Emerson with the collaboration of Martha Luginbuhl. New York The Commonwealth Fund 1945 339 p illus 27 cm. Paper $1.25 1282

Contents: Principles. Definitions and sources of data. Local public health services, existing and proposed, in the United States. Present and suggested personnel and costs for local health services for each state and the District of Columbia. State laws requiring or authorizing the creation of local health jurisdictions.

Note. This report presents information on existing local health services and recommendations for rational and adequate system under which each state would be divided into series of health administrative areas, none of which ould have population under 50,000. For each of the 1202 proposed divisions the authors give data as to the boundaries, population, area, financial resources, hospital beds, practicing physicians, and minimum desirable personnel and budgets, as well as information about existing local health services. The study is particularly addressed to town and county government officers and to residents of rural areas.

ANDERSON GAYLORD WEST AND MARGARET G ARNSTEIN

Communicable disease control a volume for the health officer and public health nurse. Second edition. New York The Macmillan Company 1948 450 p illus. 24 cm. $5.00 1283

Contents (abridged) Part Control measures The legal basis of communicable disease control Administrative agencies Role of the public health nurse Care of communicable disease case at home. Epidemiological investigation of communicable diseases. Part Typhoid and paratyphoid fever Hookworm Food poisonings and infections. Undulant fever Diphtheria. Hemolytic streptococcal infections. Rheumatic fever Whooping cough Measles. Smallpox. Poliomyelitis. Meningococcus meningitis. Pneumonia Influenza. Common colds Tuberculosis. Gonorrhea and syphilis Rabies. Impetigo, pediculosis, scabies, and ringworm Diseases spread through arthropods—plague, tularemia, Rocky Mountain spotted fever typhus, yellow fever encephalitis, malaria. Index.

Note (2752) The first part of this volume, which accounts for about one-third of the book's length, deals with general aspects of the subject and is of interest not only to public health officers and nurses but to various community agencies. The second part is devoted to discussions of specific diseases from the public health standpoint and is of practical value to health officers and nurses. All of the chapters are supplemented by lists of related literature. Compared to the first edition, minor changes have been made in many parts of the book, in order to incorporate such developments as DDT and penicillin. The bibliographies have been thoroughly revised and the chapter on rheumatic fever is new addition.

BOYD, MARK FREDERICK

Preventive medicine. Seventh edition, revised. Philadelphia W B Saunders Company 1945 591 p illus 24 cm. $6 75 1284

Contents (abridged) Diseases due to invading micro-organisms. Nutrition. Occupational diseases. The puerperal state. Heredity and disease. Special aspects of hygiene and sanitation. Demography Public health. Bibliography Index.

Note. (2753) A condensed introductory textbook, written primarily for medical students, but suitable also for practitioners in medicine and public health officers he need an up-to-date review. The underlying causes of each disease are pointed out, along with the objectives in control and the means of reaching that objective. The thesis that general practitioners must play more prominent role in preventive medicine and public health underlies the author's treatment. In the present edition the work has not been extensively revised; but the discussion of nutrition has been rewritten so that the subject is now treated in its more positive form rather than topic which is of interest only in connection with certain deficiency diseases. There are notable revisions or additions in the sections on encephalitides, rheumatic fever leptospirosis, and coccidiosis. The bibliography has been revised to include selection of the literature published since 1940 as well as older works which are still useful.

BYRD OLIVER ERASMUS

Health instruction yearbook 1948 foreword by Ray Lyman Wilbur Stanford, Calif Stanford University Press 1948 320 p 24 cm. $3 50 1285

Contents. Health as social accomplishment. Health as social problem. Nutrition and health. Excretion and health. Exercise and body mechanics. Fatigue and rest. Mental health and disease. Heredity and eugenics. Infection and immunity Chronic and degenerative disorders. Habit-forming substances. The care of special organs. Safety Health and the physical environment. Health services and facilities. Family health School health. Occupational health. Community health services. International health. Trends and portfolios. Bibliography Alphabetical list of sources. Author index. Subject index.

Note (2756) The present volume of this useful series presents abstracts of 321 articles that were selected from 100 periodicals. A broad interpretation of "health instruction was followed in making the selection; thus articles on safety education, fee splitting by physicians, and epilepsy are included as well as articles on personal hygiene.

CAVINS HAROLD M

National health agencies a survey with especial reference to voluntary associations, including a detailed directory of major health organizations. Washington D C. Public Affairs Press 1945 251 p 22 cm. $3 00 1286

Contents: Basic characteristics. Backgrounds. Social awakening. American Psychiatric Association. American Medical Association. American Dental Association. American Public Health Association. National Tuberculosis Association. National Committee for Mental

Hygiene. American Child Health Association. American Cancer Society. National Safety Council. National Society for the Prevention of Blindness. American Society for the Hard of Hearing. American Heart Association. American Eugenics Society. American Social Hygiene Association. Miscellaneous organizations. Index.

Note: The origin and growth of national voluntary health agencies in the United States are outlined in this work. The author recognizes two types of such agencies, the professional one organized by and for members of a medical group, and the promotional one created to "help solve medical socio-medical problems." An attempt is made to evaluate the work of these organizations, and the author bases his discussion on an examination of ten typical agencies. The latter part of the volume serves as a directory of 82 national health agencies, and provides information concerning the organization and activities of each group.

EBERSON, FREDERICK

Microbes militant a challenge to man the story of modern preventive medicine and control of infectious diseases. A revision of "The microbe's challenge." New York The Ronald Press Company 1948 401 p. illus. 24 cm. (Humanizing science series, edited by Jaques Cattell) $4.50 1287

Contents: The simple life. The times change. The way of parasites. Changeable microbes. Jekyll and Hyde types. Chemistry and behavior. Microbial civil warfare—antibiotics. The borderland—animate or lifeless. Virus riddles. Little microbes—what next? Microbes run amuck. Epidemics to order. The challenge. Glossary. Suggested readings. Index of authors and personages. Subject index.

Note: (3742) A narrative account for general readers of the highlights in the history of preventive medicine. There is some emphasis on the fundamental principles of modern bacteriology on which is based modern techniques of the control of infectious diseases. Although a popular book, it is not over simplified. In this edition the chapter on the antibiotics is new and there are significant changes in other portions of the text. The book is now about 50 pages longer.

EWING OSCAR ROSS

The nation's health a ten year program. A report to the President by Oscar R. Ewing, Federal Security Administrator Washington, D C. Government Printing Office, 1948 186 p. illus. 25 cm. Paper $1 00 1288

Contents: Foreword. The health of the nation: Our resources for health. Methods of meeting deficiencies. Financing the health program. Realizing on health investment. Enough manpower everywhere. Enough hospitals everywhere. An equal chance for health: Facing the economic problem. Voluntary or government insurance. A way to improve health. A government insurance program. Pros and cons of the plan. Mental health. Healthy maturity. Social and economic problems. Chronic disease—the major front. Rehabilitation for handicapped. A good start in life. Community action. Local health units. Organization of services. Community and state planning. Teamwork for health.

Note: On January 30, 1948, the President of the United States requested the Federal Security Administrator to undertake a comprehensive study of the possibilities for raising health levels and to report upon feasible goals which might be realized by the American people by 1960, suggesting any practicable methods of achieving such goals. This detailed report, illustrated by charts, is the result of that request. The emphasis is upon the gaps in health programs in the United States and the methods of correcting the chief deficiencies. The program set forth has as its central purpose the promotion of the highest possible level of national health in so far as medical care and health services can promote it.

GOLDMANN FRANZ

Public medical care principles and problems. New York Columbia University Press 1945 226 p 23 cm. $3.00 1289

Contents. Part I, Haphazard growth. The pattern of progress. The growth of public hospitals. From "free dispensary" to public medical center. The development of programs of public medical care for "persons in need." Administration of public medical care: its present framework. Part II, Directed growth: Planning for medical care. References. Index.

Note. The history of the development of public medical care in Great Britain and the United States, its status as of about 1944, and the requirements of an adequate program are outlined in this book. The author's main thesis is that adequate medical care is a fundamental human right, and that provision for it is as essential to the well being of society as it is to the health of the individual. In the final chapter he outlines the various methods that have been tried or proposed for the support and control of public medical care.

GOLDMANN FRANZ

Voluntary medical care insurance in the United States. New York Columbia University Press, 1948 228 p 22 cm. $3.00 1290

Contents: The principle of medical care insurance. Trends of development in the United States. Attitudes of national voluntary organizations. Cash indemnity plans. Nonprofit hospital service plans—Blue Cross plans. Nonprofit physicians' service plans—Blue Shield plans. Nonprofit plans covering professional and hospital services—individual practice plans. Group practice plans. Limitations and potentialities of voluntary plans. Bibliographical notes. Index.

Note. An analysis of voluntary medical care insurance that will be of considerable value to anyone who wishes to appraise the relative merits of voluntary and compulsory plans. It traces the development of voluntary plans, and discusses the distinctive features, achievements, and limitations of the programs at present in operation. Detailed information on the benefits and rates of plans now in operation is presented. The author reaches the conclusion that voluntary plans cannot be expected to provide for all of the nation.

GUNN SELSKAR MICHAEL AND PHILIP S PLATT

Voluntary health agencies, an interpretive study with a foreword by Louis I. Dublin. Under the auspices of the National Health Council. New York The Ronald Press Company 1945 364 p 22 cm. $3.00 1291

Contents (abridged) Definition, origins and types. Social values and functions of voluntary health agencies. Where the voluntary health agencies lag. The human factor. What voluntary health agencies can do to increase their effectiveness. The role of the state organizations. The role of the national organizations. The problem at the national level. Financing voluntary health work. The professional organizations. The American National Red Cross. Volunteers. Health activities of civic and welfare organizations. The future. Appendices: Statistical tables. Self-evaluation schedule for voluntary health agencies. Index.

Note: This volume comprises an excellent picture of the problems at present confronting the myriad health agencies organized on a voluntary basis throughout the United States of America. That this kind of social enterprise, representing the widest range in size and purpose, is still contributing steadily to national social betterment is not denied at the same time, the agencies themselves, integration with governmental activities, and practical aspects of agency finance are indicated as the major problems to be solved. These, with the pertinent suggestions offered for individual agency evaluation, make the study a primary concern to persons actively concerned with social work involving health. There is no bibliography

JOINT COMMITTEE ON HEALTH PROBLEMS IN EDUCATION OF THE NATIONAL EDUCATION ASSOCIATION AND THE AMERICAN MEDICAL ASSOCIATION

Health education a guide for teachers and a text for teacher education. Edited by Charles C. Wilson. Fourth edition, completely rewritten Washington, D C National Education Association of the United States, 1948 413 p illus. 24 cm. $3.00 1292

Contents (abridged) Educating children for health. Health problems—past, present, and future. Solving school and community health problems. Healthful school living. Health education through health service. The psychology of teaching health. Health education in the elementary school. Secondary school health education. Health education of college students, prospective teachers and health edu-

centers. Adult health education. Evaluation in health education. Health education in action. Appendices. Index.

Note In this volume leaders in the fields of education, medicine, and public health have collaborated to present the best in modern viewpoints concerning the responsibilities and opportunities in health education. Particular attention is given to those health problems which affect children and the discussions center about the manner in which child knowledge and attitudes to health may be influenced by healthful living at school and by proper contact with health authorities. The book is designed primarily for use by teachers, physicians, and nurses, and each chapter includes questions for class discussion, suggestions for supplementary activity and brief bibliography. A thorough revision of the earlier editions.

MOTT FREDERICK DODGE, AND MILTON L ROEMER

Rural health and medical care. New York McGraw Hill Book Company, Inc. 1948 608 p illus. 24 cm. (McGraw Hill series in health science Amos Christie, consulting editor) $6.50 1293

Contents (abridged) Part I, Rural America: The population. The economy. Part II, Present-day levels and trends of rural health. Deaths and their causes. The burden of sickness. Diseases of rural life. Part III, Rural doctors and other health personnel. Part IV, Rural health facilities. General and allied hospitals. Mental and tuberculosis hospitals. Auxiliary health facilities. Facilities for environmental sanitation. Part V, Medical services and expenditures. Part VI, Governmental efforts to improve rural health. Public health services. Special governmental programs affecting medical care. Rural health activities of the Department of Agriculture. Part VII, Voluntary health programs: Tackling the payment problem. Improving rural health resources. Part VIII, The road ahead: General social measures. Payment for medical care. Rural health facilities. Medical service of high quality. Public health organization. Name index. Subject index.

Note A comprehensive authoritative study of medical and health facilities in the rural areas of the United States of America. The inadequacies of present-day facilities are shown and are related to the economic background. The very serious shortage of physicians, dentists, and nurses is examined in detail and the reasons for it are analyzed. In the final pages of the book the authors argue for rural health service supported by the Federal Government under program for national health insurance, but they also point out remedial measures which can be taken without such national scheme. The book is based on wide literature review and original sources are cited freely in footnotes.

MOUNTIN JOSEPH WALTER, AND EVELYN FLOOK

Guide to health organization in the United States. Washington D C. Government Printing Office, 1947 71 p illus. 23 cm. (United States. Public Health Service. Miscellaneous publication no 35) Paper $0.20 1294

Contents Introduction. Federal health organization. State health organization. Local health organization. Voluntary health agencies. Professional education. Summary. Bibliography. Appendix.

Note This pamphlet brings together brief descriptions of the many agencies rendering health services in the United States and thus gives panoramic view of health organization in the nation. It is concise source of information for the general public and should also be of help as ready reference guide for professional public health workers and as an introduction to the multiple systems of health service for American students and for visitors from other countries.

MOUNTIN JOSEPH WALTER, AND OTHERS

Health service areas, requirements for general hospitals and health centers. By Joseph W Mountin Elliott H Pennell, and Vane M. Hoge United States Public Health Service. From the Division of States Relations, Bureau of State Services. Prepared by direction of the Surgeon General. Washington D C. Government Printing Office, 1945 68 p illus. 23 × 30 cm. (United States. Public Health Service. Public health bulletin no 292) Paper $0.25 1295

Contents Introduction. A plan for coordination of hospitals and health centers. Outlines for hospital districts. Number and general characteristics of districts. Estimates of needed beds. Effect of state boundaries upon estimates. Health centers. Integration of general facilities with mental, tuberculosis, and Federal hospitals. Sequence of construction and flexibility of use. References. Selected bibliography. Appendices: Maps showing counties, districts, and regional areas. Tables showing selected statistics for counties, districts, and regional areas. Table showing estimates of hospital beds needed. Table showing estimates of health centers needed.

Note A plan for an integrated national scheme of hospitals and related facilities to cover every geographical section of the United States is put forth in this bulletin. It is intended by the authors to serve as point of departure for further thought, study and action. Public financial support to maintain and expand hospital service is assumed.

MUSTARD HARRY STOLL

Government in public health. New York The Commonwealth Fund 1945 235 p 21 cm. (New York Academy of Medicine. Committee on Medicine and the Changing Order Studies) $1 50 1296

Contents Preface, by James Alexander Miller. The nature of the document. Acknowledgments. Certain preliminary considerations. Federal health services. State health departments. Local health departments. Activities of government in public health program. A summary of trends and consideration of certain needs. Appendix: Two historical documents. Index.

Note In this work the development of public health service in the United States is reviewed from the social and governmental standpoints. Much of the book deals with the public health services as they are today and with the potential future developments.

SHEPARD WILLIAM P AND OTHERS

Essentials of public health with the collaboration of Charles E Smith, Rodney R. Beard, and Leon B Reynolds. With a foreword by Ray L Wilbur Philadelphia J B Lippincott Company 1948 600 p illus. 20 cm. $5 00 1297

Contents Public health and the practicing physician. Environmental sanitation. Water purification. Sewage treatment. Refuse disposal. Private water supplies. Hygiene of foods. Insect and rodent control. Communicable disease—general. Special communicable disease control. Other public health problems. The school health services. Health education. Occupational health—industrial hygiene. Occupational health—light, heat, ventilation. Statistics. Index.

Note A handbook primarily for general medical practitioners and secondarily for medical students. Its purpose is to inform physicians on the scope and chief methods of public health work, to describe the chief national agencies and types of local agencies, and to orient private practitioners in the use and support of public health work. In general the treatments of the special aspects of public health work are very concise, but adequate references to other literature are supplied.

SINAI NATHAN AND OTHERS

Health insurance in the United States by Nathan Sinai, Odin W Anderson and Melvin L. Dollar New York The Commonwealth Fund 1946 115 p 22 cm. $1.50 1298

Contents Preface, by George Bachr. Introduction. The health insurance movement during three periods. Attitudes of professional, government, and lay groups. Enabling legislation for voluntary plans. Characteristic features of voluntary plans. Problems before voluntary plans. The health insurance movement continues. References. Index.

Note One of series of monographs prepared under the auspices of the New York Academy of Medicine. It traces the development of medical or health insurance from the beginning of the movement about 1915 up to 1946. It describes the basic features of Blue Cross and similar plans sponsored by hospitals and medical societies and

outlines the problems involved in the administration of such plans. A five-page bibliography is included.

SMILLIE, WILSON GEORGE

Preventive medicine and public health. New York The Macmillan Company, 1946 607 p illus. 22 cm $6 00 1299

Contents (abridged) Section I, Introduction Population trends and the public health. Vital statistics. Section II, Environmental sanitation Water supplies and swimming pool sanitation. Excreta disposal. Vermin and their control. Fumigation and disinfection. Food inspection. Sanitation of milk, and milk as transmitter of disease Disease transmitted through food other than milk and milk products (food poisoning) The general environment in relation to health and disease. Section III, Communicable disease control. Section IV Child hygiene Child health protection Oral hygiene. School health services Section Adult health protection and promotion Geriatrics. Mental hygiene. Malnutrition and its prevention. Control of cancer. Preventive aspects of peptic ulcer and appendicitis. The role of public health and preventive medicine in heart disease and hypertension. Preventive aspects of obesity and diabetes. Preventive aspects of arthritis. Preventive aspects of allergic conditions. Preventive aspects of alcoholism. Industrial hygiene. Section VI, Public health administration Rural health administration. Municipal health administration. State health administration. National health services. Voluntary health activities. Health education. The public health nurse. Adequacy of medical care. A nation-wide medical care program. Index

Note. The author's aim in this undergraduate medical college textbook is to impress upon students the responsibility of physicians, particularly general practitioners, toward keeping people well. Such program involves application of the principles of preventive medicine along with clinical medicine and the maintenance of an adequate public health program. The administration of public health is not discussed but the functions of official health agencies are outlined. Relatively more consideration than is usual in such text is given to the social and economic factors involved. The chapter on statistical techniques offers useful guide to the physician in analyzing and interpreting current medical literature and in presenting results of his own observation. Bibliographical references follow some of the sections.

SMILLIE WILSON GEORGE

Public health administration in the United States. Third edition New York The Macmillan Company 1947 637 p. illus. 24 cm. $6 50 1300

Contents (abridged) Part Functions of health organization. Development of public health administration in the United States. Part Administrative control of communicable diseases Administrative methods in control of diphtheria. Other communicable diseases of childhood Administrative control of typhoid fever and allied diseases Administrative methods in control of tuberculosis Venereal disease control. Acute respiratory infections. Administrative control of smallpox. Malaria. Rabies. Poliomyelitis. Meningococcus meningitis. Intestinal parasites. Part III: Basic activities of health organization Vital statistics Epidemiology The public health laboratory Public health nursing. Sanitation and sanitary inspection. Child hygiene. Public health education. Mental hygiene. Industrial hygiene. Nutrition. Adult hygiene. Part IV Organization of public health programs Municipal health administration. Rural health administration State health administration Health administration in the Federal government. Voluntary health organizations. The practicing physician and the public health department Training of public health personnel. Budgets and budget making. The national health program. Appendix. Index.

Note (2778) A comprehensive treatment of public health techniques and activities. It used both as textbook in schools of public health and as reference book of information on standard and current methods. This edition has been extensively revised to incorporate knowledge and techniques developed since 1940. The new material includes information on recent developments in the control of communicable diseases, the antibiotics, new procedures in sanitation, and recent contributions to such fields as nutrition and geriatrics. The appendix contains the standard minimum qualifications for key public health positions that have been set by the Committee on Professional Education of the American Public Health Association.

STERN BERNHARD JOSEPH

Medical services by government local, state, and federal. New York The Commonwealth Fund 1946 222 p. 21 cm. (New York Academy of Medicine Committee on Medicine and the Changing Order Studies) $1.50 1301

Contents: Preface, by W. G. Smillie. Introduction. Medical services for the indigent by local government; social and historical backgrounds. Medical services by local government; recent developments. Medical services by state government. Expenditures for medical services by state and local governments. The nature and extent of hospital services by government. Federal grants-in-aid for medical care. Medical services by the federal government. Appendix Statistical data relative to hospital service. Index.

Note The sixth in series of monograph studies. The author traces the growth of government responsibility for public health, and surveys the medical services that are now administered or controlled by governmental agencies. The volume is well documented, and is intended as source of information for those who are concerned with the subject of medical care in the United States.

STIEGLITZ, EDWARD JULIUS

A future for preventive medicine. New York The Commonwealth Fund 1945 93 p illus. 22 cm. (New York Academy of Medicine. Committee on Medicine and the Changing Order Studies) $1 00 1302

Contents: Preface, by Ernest L. Stebbins. Introduction. Definitions. Health over the last forty years. A program for preventive medicine. Summary References. Index.

Note: One of series of studies on recent trends in medical practice sponsored by the New York Academy of Medicine. It outlines hat preventive medicine is doing and hat it can do for the nation's health. The author indicates that the practice of preventive medicine has notably decreased infant and childhood mortality and that now and for the future the chief problem is one of controlling the degenerative diseases of an individual' middle years and old age. The highest expression of preventive medicine according to the author is not merely the prevention of disease, but the establishment and maintenance of optimum health.

TURNER CLAIR ELSMERE

Personal and community health. Eighth edition. St. Louis C. V Mosby Co 1948 565 p. illus 22 cm $4.00 1303

Contents Part I, Personal health Hygiene and health. Nutrition. Digestion Oral hygiene. Respiration. Circulation. The kidneys. The skin. Endocrines. The sense organs. The hygiene of the nervous system. Mental hygiene. Narcotics and stimulants. The hygiene of body activity Body mechanics. Foot hygiene. Heredity and health. The hygiene f reproduction. Adult hygiene. Part II, Community health The science of disease prevention. Essential facts of immunity Alimentary and respiratory infections Contact and inoculation diseases. Food control. Water supply Waste disposal. Ventilation, heating, and lighting Public health administration. Maternal and child hygiene. School hygiene. Industrial hygiene. Appendices The control of communicable diseases. Disinfection and disinfectants. Prefixes, suffixes, and combining forms. Glossary Index.

Note A widely used college textbook. It is designed to give useful information and instruction on wide variety of health problems which will affect the life of the average college student or graduate, whether or not he enters scientific profession. The close relationship between personal and community health and the responsibility of the individual toward the community in health matters are stressed.

WADSWORTH AUGUSTUS BALDWIN

Standard methods of the Division of Laboratories and Research of the New York State Department of Health with a foreword by Gilbert Dalldorf Third edition. Baltimore The Williams & Wilkins Company 1947 990 p illus 23 cm. $10.00 1304

Contents (abridged) General laboratory procedures: General bacteriologic technic. Stains and reagents. Care and breeding of laboratory animals. Use of experimental and test animals. Maintenance of the collection of type cultures. Determination of hydrogen-ion con-

centration. Gasometric chemical analysis and related technics. The spectroscopic laboratories. Estimation of potency by biologic assay. Methods used in the department for the preparation of media and glassware. Methods used in the diagnostic laboratories. General instructions. Examination for pneumococci. Examination for streptococci and staphylococci. Examination for mycobacterium. Examination for bacteria of food poisoning. Examination for brucella and other microorganisms commonly associated with animal hosts. Examination for bacteria of actinomycosis and mycotic disease. Examination for parasitic worms. Examination of blood. Examination of urine. Examination of cerebrospinal fluid. Histologic procedures. Methods used in the laboratories for sanitary and analytical chemistry. Examination of sewage, sewage sludge, industrial wastes, and polluted water. Examination of milk and cream. Methods used in the antitoxin, serum, and vaccine laboratories. Production and standardization of diphtheria toxin. Purification and concentration of plasmas and sera of immunized horses and rabbits. Preparation of pertussis vaccine. Preparation of brucella abortus vaccine. Preparation of diagnostic, prophylactic and therapeutic products for distribution. Sterility tests of prophylactic, therapeutic, and other preparations. Methods used in the administrative offices. Methods used in the library, publications, and museum department. Appendix. Index.

Note. (2781) This reference book is valuable for its detailed description of the laboratory methods and related procedures of a large and highly organized governmental health department. The first edition, published in 1927 was undertaken chiefly as a means of maintaining a high standard of work among the many employees of the New York State Department of Health by providing each one with precise, detailed directions for the routine technical procedures with which he was concerned. In the twenty years since the publication of the first edition the value of the work has been recognized by public health agencies and workers throughout the world. Numerous significant changes have been made in the present edition to correspond with changes in the procedures of the New York State Department of Health which took place from 1939 through January 1945. There is a new chapter on biologic assay and several important diagnostic procedures, such as the serodiagnosis of syphilis, have been revised. Changes due to new emphasis on virus diseases and to the growing importance of chemotherapy appear in many chapters. The lists of references which follow the chapters have been revised and augmented.

NURSING

GENERAL WORKS

BROWN ESTHER LUCILE

Nursing for the future, a report prepared for the National Nursing Council. New York Russell Sage Foundation, 1948 198 p 24 cm. $2.00 1305

Contents: Extension of health services. Future demand for nursing care. Differentiation of nursing service according to function. Future role of the professional nurse. Education for practical and graduate bedside nurses. Education for the professional nurse. Resources for the future.

Note: A brilliantly written report whose chief purpose is to point out how nursing education may be best adapted to the present and future needs of society. It is based on an excellent study of present-day nursing education in the United States. The basic information was obtained in visits to hospitals and nursing schools and by interviews with public health leaders, doctors, and other interested parties. Two advisory committees assisted the author, and three regional conferences attended by directors of nursing schools and other persons connected with nursing education were held in order to obtain information and opinion. The book contains important material for students of nursing and all persons interested in the education of nurses.

DEMING, DOROTHY

The practical nurse. New York The Commonwealth Fund 1947 380 p 23 cm. $3.00 1306

Contents: The practical nurse and the care of the sick. Who is the practical nurse? The supply of practical nurses. The birthplace of practical nursing—the home. General hospitals. Mental hospitals. Tuberculosis hospitals. The chronically ill and the aged: convalescents. Industry. The newest field—public health. Uncle Sam needs practical nurses. Other opportunities for the practical nurse. The schools of practical nursing. The curriculum in schools of practical nursing. Supervision. Protection through legislation. Hiring reliable practical nurses. Next steps. Appendix: Annotated list of textbooks and instruction outlines. The approved schools of practical nursing. Practical nurses in visiting nurse associations. Practical nursing service through professional registries in Ontario, Canada. Past opinions regarding state licensure of practical nurses. Index.

Note: In the United States the term "practical nurse" designates a person who has not pursued a full course of education and training that would entitle her to a license or registration as a professional nurse but who by virtue of experience, or a shorter course of instruction, is permitted to carry out simpler types of nursing activities. In this book the author has described how practical nurses have functioned in the past and the many ways in which they are now serving in homes, hospitals, industry and public health. The need for this type of nursing service is pointed out, and ways of expanding it and improving it through effective choice, preparation, supervision, and legal control are suggested.

GELINAS AGNES

Nursing and nursing education. New York The Commonwealth Fund, 1946 85 p. 21 cm. (New York Academy of Medicine. Committee on Medicine and the Changing Order Studies) $1.00 1307

Contents: Preface, by Mrs. August Belmont. Introduction. The development of nursing as a profession. Nursing supply and demand before and during World War II. Personnel policies and the maintenance of standards. Nursing education—problems and recommendations. Estimated nursing supply and demand in the post-war period. Building the future of nursing. Index.

Note: The volume is directed at present and prospective nurses and at all others who are concerned with medical care whether from the standpoint of private nursing or public health. Reference lists of books and periodicals for further reading are given at the end of each chapter. The author, a registered nurse, is Professor of Nursing and Chairman of the Skidmore College Department of Nursing.

GORDON, H. PHOEBE, AND OTHERS

Counseling in schools of nursing a study of the principles and techniques of personnel services for students by H. Phoebe Gordon Katharine J Densford, and E. G Williamson New York McGraw Hill Book Company Inc. 1947 279 p. 21 cm. (McGraw Hill series in nursing, Lucile Petry, editorial advisor) $3.00 1308

Contents (abridged): Part I, The professional background of the student in nursing: Historical background. The role of counseling and personnel work. Part II, Understanding the student in nursing: Psychological characteristics of student nurses. Social background of student nurses. Part III, Counseling and personnel services in schools of nursing. Measures used in selecting and counseling students. Student orientation. Disciplinary counseling. Student health programs. Extracurricular activities. Part IV Developing the personnel program in a school of nursing: The initial organization of the program. The continuing development of the program. Index.

Note: An expert analysis of the philosophy of guiding or advising student nurses together with presentations of practical techniques in such work. The book is most directly of interest to persons engaged in counseling in nursing schools, but is of interest also to persons such as directors of nursing schools who are concerned with the organization and planning of programs for nursing education.

JENSEN JULIUS, AND DEBORAH MACLURG JENSEN

Nursing in clinical medicine. New York The Macmillan Company 1945 829 p. illus. 21 cm. $4.00 1309

Contents (abridged): General introduction. Fundamental principles. Metabolic and deficiency diseases. Diseases of the respiratory system. Diseases of the cardiovascular system. Diseases of the blood and blood forming organs. Diseases of the gastro-intestinal system. Diseases of the urinary system. Diseases of the musculo-skeletal system. Diseases of the ductless glands. Diseases due to poisons, chemical and physical agents. The infectious diseases. Appendices: Diets. Medical nursing procedures. Index.

Note: This work is designed as a textbook for nursing students and a reference book for the practicing nurse. It describes the pathology of the common diseases, their clinical manifestations, normal courses, possible complications, and their nursing care. The first edition was titled Clinical nursing in medicine. In the present edition there are many revisions and additions including new material on virus pneumonia, penicillin, hypertension and diseases of the skin. The reference lists also have been revised.

MULLER, GULLI LINDH AND DOROTHY E. DAWES

Introduction to medical science. Second edition, illustrated. Philadelphia W B Saunders Company 1948 560 p. illus. (part col'd) 19 cm. $4.00 1310

Contents. The development of medical sciences. A historical review of the progress of medicine. The causes of disease. Definition of terms and predisposing causes of disease. Endogenous or internal causes of disease. Exogenous or external causes of disease. How disease manifests itself in the body. Changes in the body produced by injury. Inflammation, reaction of the body to injury. Circulatory disturbances. Tumors. Examination of tissues. How the doctor makes the diagnosis: How the diagnosis is made. Examination of the patient. Urine. Blood. Examination of other body fluids. Blood chemistry. Bacteriological diagnostic tests. Immunological diagnostic tests. Gastro-intestinal studies and tests. Special examinations. Collection and handling of specimens. How disease is treated. General treatment of disease. Forms of therapy. Physiotherapy. How disease is controlled and prevented. The development of health control. The federal health program. The health program of the state. The health of the community. Sanitary conditions in the home. The dairy industry and its control. Other food products. Water supply. Disposal of sewage and refuse. Industrial sanitation. Schools and summer camps. Health control in disaster situations. Glossary. Index.

Note. A general introduction to the scope and basic techniques of medicine and public health. It is a nursing school textbook, and its purpose is to provide the student nurse with a background that will enable her to understand the significance of the work she will do in hospital clinics and wards. A considerable number of changes have been made in this edition in order to cover new techniques that came into use in recent years, particularly during World War II.

SELLEW, GLADYS, AND C J NUESSE

A history of nursing. St. Louis The C. V Mosby Company 1946 444 p illus. 22 cm. $3 75 1311

Contents (abridged) Nursing practices among primitive peoples. Nursing in the ancient civilizations. Welfare aspects of medieval civilization. Medicine and nursing in the Middle Ages. The origins of modern health problems. Scientific progress in medicine. Early modern nursing organizations. The emergence of the nursing profession in the British Empire. The extension of professional nursing around the world. The beginning of professional nursing in the United States. Advances in nursing education and professional services. Professional nursing and contemporary American problems. New directions in professional development. Nursing under Catholic auspices in the United States. A summary of recent nursing trends outside the United States. Index.

Note. In this volume the authors have made a special effort to indicate the close relationship between social history and nursing. They trace the evolution of nursing practices from earliest cultural periods up to the present day and show how these practices are interwoven with the religion, laws, economic system, and whole cultural pattern of a people. The book is written for the student nurse and is intended to serve as an introduction to the subject, rather than as a comprehensive study of nursing history. Each chapter concludes with review questions and suggestions for further reading.

WOLF LULU KATHRYN

Nursing. New York D Appleton-Century Company Incorporated, 1947 534 p illus. 22 cm. $3 75 1312

Contents (abridged) Part I, Orientation to nursing: The origin and development of nursing. Twentieth century trends in nursing. The nation's health problems. The nurse in the nation-wide health program. Part II, Orientation to hospital nursing: The hospital—a community health agency. The individual patient in the hospital. Part III, Orientation to patient care: Investigating the patient needs. Recording observations on the patient's record. Planning the patient's nursing care. Providing for the patient's personal cleanliness. Providing for the patient's nutritional needs. Providing for the patient's comfort, rest and relaxation. Protecting the patient and others from infection. Giving medications to the patient. Withdrawing fluid from the patient's body. Providing for the patient's total needs on discharge from the hospital. Index.

Note. A comprehensive and inspiring textbook for student nurses. The material on the background and the present status of nursing is well condensed and effectively presented. More than two-thirds of the volume is given over to discussion and explanation of various nursing techniques, explicitly and in detail, emphasis being on hospital rather than home care. Throughout the text stress is laid on the nurse's need to understand the patient's emotional and psychological problems, as well as his physical illness. The significance of nursing to public health is emphasized. Selected references follow each chapter and there are numerous drawings which illustrate techniques. The author is Professor of Nursing in Vanderbilt University.

WORKS ON SPECIAL TOPICS

ANDERSON CAMILLA MAY

Emotional hygiene the art of understanding Cartoons by Dorothy G Stevenson. Fourth edition revised. Philadelphia J B Lippincott Company, 1948 266 p illus. 21 cm. $3.50 1313

Contents (abridged) Unit One, The biologic and social bases of behavior: Basic emotional patterns. On being important. Evolution of love. We're made that way. Escapes and compromises. A guide for the perplexed. Right and wrong. Unit Two, Personality and adjustments: Personal problems. Patients. Relatives. Colleagues. Trying situations. Unit Three, The emotions in relation to special fields: Psychiatric nursing. Public health nursing. The school nurse. The nurse as a witness. Glossary. References and suggested readings. Index.

Note: A brief, eminently practical outline of common behavior patterns. It is written for student nurses and is well established as a textbook. Its fresh, understandable discussions of universal emotional problems and reactions make it suitable also for lay readers outside this profession.

COLIEN, FRANCIS EDWARD

Principles of microbiology Second edition. With 150 text illustrations and 25 color plates. St. Louis The C V Mosby Company, 1946 530 p illus. (part col d) 22 cm. $3.50 1314

Contents (abridged) Part I, Introduction to the study of microorganisms: The microscope and its use in microbiology. The biology of microorganisms. The cultivation of microorganisms. Part II, Destruction of microorganisms: The application of sterilization and disinfection. Part III, Classification and related subjects: Microbic variation—bacteriophage. Classification. Collection and handling of material for bacteriological examination. Part IV, Infection and immunity. Part V, Pathogenic microorganisms: The staphylococci. The streptococci. The pneumococci. The neisseria. The hemophilus group. The coliform group. The enteric group. The aerobic and anaerobic spore-forming bacteria. The rickettsiae. The spirochetes. The pathogenic fungi. The filtrable viruses. The pathogenic protozoa. Part VI, Microbiology in relation to water, food and milk. Appendix: Preparation of culture media. Reagents and special tests. Preparation of stains. Glossary. Index.

Note (1933) In this text for student and graduate nurses emphasis is placed on the importance of disease prevention, public health education, and various aspects of microbiology which are essential in the field of nursing. Preparation of culture media, laboratory exercises, and reading references are included. The sections on laboratory diagnosis and the prevention and control of tropical diseases have been revised in this edition, and chapters added on the collection and handling of bacteriological material and microbiology in relation to food. New material is included on penicillin and sulfonamide compounds, and the sections dealing with the shigella and salmonella organisms, rickettsiae, viruses, and pathogenic protozoa have been thoroughly revised.

DAY SISTER MARY AGNITA CLAIRE

Basic science in nursing arts Second edition With 145 illustrations. St. Louis The C V Mosby Company 1947 725 p illus. 22 cm. $4.00. 1315

Contents (abridged) Part I, Nursing activities associated with the management of the patient's physical environment. Part II, Admission procedure and simple diagnostic and therapeutic measures. The patient's bath and toilet. Food service. General comfort measures. The psychologic needs of the patient. Religious needs of the patient. Methods of applying dry heat and cold. Hydrotherapeutic measures. Radiant energy. Massage. Part III, Nursing techniques involved in diagnostic tests and in prophylactic and remedial measures. Some special diagnostic tests. The general preoperative and postoperative care of the surgical patient. Surgical aseptic technique. The administration of medicines. The administration of parenteral fluids. The aspiration and injection of body cavities. Drainage, irrigation, medication and treatment of the gastrointestinal tract. Drainage, irrigation, medication, and treatment of the genitourinary tract. Irrigation, medication, and treatments of the eye, ear, nose, and throat. Medical aseptic nursing techniques in the general hospital. Part IV, The orthopedic patient in the general hospital. Part

Psychiatric procedures—the care of the psychiatric patient in the general hospital. Index.

Note (1788) This textbook is an outgrowth of the nursing procedure manual of the St. Mary's group of hospitals of St. Louis University. Principles rather than techniques have been stressed, and procedures are simplified to facilitate their adaptation to either home or hospital nursing. The volume is a revision of an earlier edition *Principles and techniques of nursing procedures*; follows the general plan and scope of the previous book. A contribution by the chaplain of St. Mary's Hospital has resulted in enlargement of the chapter dealing with religious care of the Roman Catholic patient. References given at the end of some sections have been brought up to date.

DOOLEY, MARION SYLVESTER, AND JOSEPHINE RAPPAPORT

Pharmacology and therapeutics in nursing. New York McGraw Hill Book Company Inc., 1948 444 p illus. 24 cm. $3 75 1316

Contents (abridged). History of drug therapy. General features of drugs. Drug administration. Analgesics. General anesthetics. Antiseptics and disinfectants. Endocrines. Vitamins. Blood, blood products, and blood substitutes. Antimalarials. Sulfonamides. Penicillin and streptomycin. Serums. Vaccines. Drugs in roentgenology. Laboratory demonstrations. List of commonly used proprietary names with their standard nonproprietary names. Reference reading suggestions. List of visual materials. Index.

Note A new textbook which is designed for use in schools of nursing organized at the college level. Among its several features are the inclusion of new drugs and new techniques of administering drugs which came into use during World War II and later. There is, for example, an adequate discussion of the properties, action and uses, toxicity, dosage, and technique of administration of streptomycin. The material is organized on a functional basis; that is to say drugs are discussed under their uses.

DWYER SHEILA MAUREEN AND GEORGE W FISH

Modern urology for nurses. Second edition. With a foreword by Helen Young. Illustrated with 66 engravings. Philadelphia Lea & Febiger 1945 287 p. illus. 21 cm. $3.25 1317

Contents. Floor plan, personnel and equipment for urological service. Urological instruments and apparatus, use and care. Minor urological procedures. Urological examination and nursing care. The kidney and ureter. Renal and ureteral nursing care. The prostate. Nursing care in prostatic conditions. The bladder and urethra and nursing care. The male reproductive system. Cystoscopic instruments and procedures. Operating room procedures. A teaching program for urology. Index.

Note: A nurse and urologist have collaborated to prepare this text for both graduate and student nurses. Previous nursing experience is assumed and attention is directed entirely to the special techniques, equipment, and problems associated with the care and treatment of urological patients. The book is also designed to help head nurses plan practical teaching programs. This edition has not been greatly changed since the 1940 volume. Revisions have been made, however, in accordance with advances in knowledge, especially with regard to the newer uses of the sulfonamides and penicillin in urinary infection. The chapter on teaching urology has been rewritten with questions and suggested student activities in parallel columns.

GILLETT LUCY HOLCOMB

Nutrition in public health. Philadelphia W B Saunders Company 1946 303 p. illus 20 cm. $3.25 1318

Contents. The widespread influence of nutrition. Choosing foods for good nutrition. What children of various ages should eat. About adolescents and adults. The family meals. Food customs of various racial and national groups. Diets for special conditions. Food and the family budget. Planning the food budget. Maximum health protection from food dollars. Index.

Note. This little manual is designed for the guidance of public health nurses responsible for carrying out a program of correct nutrition which may be sponsored by a public or private agency. It is written from the point of view of the nurse who has direct contact with mothers and housewives, and who is able to offer advice concerning proper diet and the planning of family budgets to obtain maximum food values. The author is a former director of the Nutrition Service of the Community Service Society of New York City.

KIMBER, DIANA CLIFFORD, AND CAROLYN E. GRAY

Textbook of anatomy & physiology Twelfth edition. Revised by Caroline E. Stackpole and Lutie C. Leavell. New York The Macmillan Company 1946 773 p. illus. (part col d) 22 cm. $4 00 1319

Contents (abridged) Unit I. The body as a whole—structural and functional relationships and organization. Unit II. The structural and functional relationships for correlation and co-ordination of external activities. Unit III. The structural and functional relationships for correlation and co-ordination of internal activities—metabolism. Unit IV. Adaptive responses and the special senses. Unit V. The structural and functional relationships for human reproduction and development. Reference books. Glossary. Index.

Note: (1312) The first edition of this book was published in 1893 and in its various editions it has been a standard textbook since that year. *It is designed for student nurses and is used chiefly* in schools of nursing, but it is suitable for use in any course where it is desired to give a fairly inclusive but not exhaustive exposition of human anatomy and physiology and their interrelationships. The changes which have been made in this edition as compared to the eleventh edition are not extensive, but they include some reorganization of the material and some changes in the illustrations and in the legends which accompany the illustrations. The same publisher offers C. E. Stackpole and L. C. Leavell, *Laboratory manual in anatomy and physiology* 2nd edition, 1948, 216 p., $1.00, for use with this book.

KRUG ELSIE E. AND HUGH ALISTER MC GUIGAN

An introduction to materia medica and pharmacology With 37 text illustrations and 15 color plates Fifth edition. St. Louis The C. V Mosby Company 1948 558 p. illus. (part col d) 22 cm $4.00 1320

Contents (abridged). Pharmaceutic preparations. The administration of medicines. The action of drugs—dosage. Common poisons and antidotes. Common active principles of plant drugs. Antiseptics and disinfectants. Pharmacology as related to the nervous system. Pharmacology as related to the digestive system. Pharmacology as related to the circulatory system. Pharmacology as related to the respiratory system. Pharmacology as related to the skin and mucous membranes. Pharmacology as related to the urinary system. Pharmacology as related to the eye. Pharmacology as related to the reproductive system. Chemotherapy of specific diseases. Pharmacology as related to metabolism and nutrition. Serums and vaccines. History of materia medica. Drug legislation. General references. Synonymous terms. Glossary. Index.

Note. (1321a) A text for the student nurse based on *Brief materia medica for nurses*, St. Louis, 1931. Emphasis is placed on the nurse's work of administering drugs to patients, and the use of various solutions and antiseptics in hospital wards. The effect of drugs on physiological processes, the reasons for their administration, and the proper dosage are also described. This text has been revised to conform with changes made in the thirteenth edition of United States Pharmacopoeia and the eighth edition of the National Formulary. New drug descriptions include [illegible], phenacaine chloride, thiamine, [illegible], folic acid, dicumarol, and additional material on [illegible] and the vitamins. Chapter bibliographies, where they have been long, brought up to date.

MARSHALL CLYDE

An introduction to human anatomy Third edition with 303 illustrations [illegible] Revised by Edgar L. Lazier Philadelphia W B Saunders Company 194[illegible] 41[illegible] p illus (part col'd) 20 cm $3.00 1321

Contents. Introduction. The bones and joints. The muscles and fasciae. Epithelium and skin. The [illegible] system. The [illegible]

respiratory system. The urinary system. The reproductive system of the male. The reproductive system of the female. The circulatory system. The nervous system. The organs of sense. The ductless glands. Developmental anatomy. Reference books in anatomy. Index.

Note (1769) A standard introductory textbook for use in courses in nursing schools and in liberal arts colleges. Although it is short in comparison to the full scale treatments which are written for use by medical college students, it presents a fuller and more detailed account than is given in some books of its kind. Most of the subject matter lies in gross anatomy; but there is a little material on microscopic anatomy and also a little on physiology. A fair number of changes are evident in this edition. The material on muscles has been expanded and a number of new illustrations have been added. The treatment of tissues has been revised and numerous minor changes have been made throughout the work.

MILLARD NELLIE D., AND BARRY G KING

Human anatomy and physiology With 297 illustrations (43 in color) 190 by Lucille Cassell. Second edition, reset. Philadelphia W B Saunders Company 1945 514 p illus. (part col d) 20 cm. $3.50 1322

Content (*abridged*) Unit One, The body as an integrated whole. *Unit Two, The erect and moving body* *Unit Three*, Maintaining the metabolism of the body *Unit Four* Reproduction of the human body Unit Five Integration and control of the body by the nervous system. References. Index.

Note. (1770) A comparatively brief textbook intended for use in introductory courses on the subject. It is designed primarily for use in schools of nursing, but it is suitable for use in liberal arts colleges as well. The illustrations are numerous and well drawn. The chapters are supplemented by summaries and questions for discussion which are intended to facilitate the teaching and learning of the subject. Forty-five new illustrations have been added in this edition, and several chapters have been rewritten. The most extensive textual changes appear to have been made in the chapter on the autonomic nervous system.

NEAL, RAYMOND ELWOOD

Chemistry in nursing New York Mc Graw Hill Book Company Inc., 1948 564 p. illus. 24 cm. (McGraw Hill series in nursing Lucile Petry consulting editor) $4 00 1323

Contents (*abridged*) Unit One Physical and chemical changes. Unit Two Some fundamental concepts Unit Three. Oxygen. Unit Four: The physics of water The chemistry of water Unit Five: Nitrogen and its oxides. Unit Six. Acids, metal hydroxides, and salts Unit Seven Reactions of ions. Unit Eight Chlorine and its compounds. Unit Nine Carbon, its oxides, and carbonates Unit Ten Organic chemistry Unit Eleven: Alcohols. Unit Twelve Aldehydes, ketones, and acids. Unit Thirteen Carbohydrates Unit Fourteen Esters. Unit Fifteen. Proteins. Unit Sixteen Aromatic chemistry Appendix. Index.

Note: The author of this text has made a special effort to adapt his subject to meet the special needs of student nurses and to present the material in a clear and readable style Practical applications are emphasized and the sections on physiological chemistry are integrated with the discussions of the chemistry of foods and digestion. Review exercises and experiments to be prepared by the students are printed on perforated pages to facilitate correction by the instructor. Other aids for instructors, such as suggested demonstrations for lectures, lists of materials required for experiments, and visual aid material, are included in the appendix.

PROUDFIT MISS FAIRFAX THROCKMORTON AND CORINNE HOGDEN ROBINSON

Nutrition and diet therapy a textbook of dietetics Ninth edition New York The Macmillan Company 1946 782 p. illus 22 cm. $4.00 1324

Contents (*abridged*) Normal nutrition. Normal nutrition in special conditions. Diet therapy Practical applications of nutrition—elementary cookery Recipes. Appendix Dietary case studies. Tables Composition of foods. Fruits and vegetables classified as to carbohydrate content. Percentages of certain of the mineral elements in the edible portions of foods. Acid-producing foods. Alkali-producing foods. Purine content of foods. Tables for height and weight. General reference and reading list. Index. Recipe index.

Note (1838) A text especially designed for use in schools of nursing. The present edition has been rewritten and rearranged. The style is more concise and less technical than in previous editions and the book as a whole has been condensed and simplified. It now reflects the modern trend toward fewer special diets. New material has been added on safeguarding the food supply and on feeding the aged.

RICHARDS ESTHER LORING

Introduction to psychobiology and psychiatry Second edition St. Louis The C. V Mosby Company 1946 419 p 22 cm. $3 75 1325

Contents (*abridged*) Part One, Fundamentals of human behavior functioning: Historical survey of man's study of man. Personality investigation and study outline. Psychosexual patterns and emotional maturity Part Two, Fundamentals of psychiatric work Historical survey of treatment of psychiatric illness Fact-gathering in psychiatry (examination procedures) Some objectives of psychiatric nursing. Part Three, Fundamentals of psychiatric illnesses and general treatment procedures Varying degrees of defectiveness. Neurotic or psychoneurotic reactions. "Major" types of psychiatric illnesses. Organic brain disorders or involvements. *Delirious reactions.* Mood disturbances (excitements and depressions) Thinking disturbances. Alcoholism, by R. V Seliger Appendices Psychobiological terms—meyerism. Tools used in psychiatry Description of some therapeutic techniques. Description of the convulsive therapies. Reading references. Authors index. Subject index.

Note (1840) This text is designed to give undergraduate nurses and medical students some idea of the need for understanding human behavior in its relationship to the practice of their profession. Methods of examination, investigation, and treatment in psychiatric work are described, but no attempt is made to cover the field of psychiatric nursing. The practical discussions of the biologic conditions, intellectual set-up and psychiatric disturbances of the individual are illustrated with numerous case histories. This edition has been revised and reorganized in accordance with the growing acceptance of psychiatric knowledge and standards. A chapter on alcoholism has been added, the appendix now includes a description of some of the tools used in practical psychiatry and the chapter references have been brought together in a formal bibliography

SHERMAN MANDEL

Psychology for nurses. New York Longmans Green and Co 1947 237 p illus. 21 cm. $2 75 1326

Contents: The problems of psychology Perception. Learning and memory Thinking and reasoning. Work and mental efficiency Intelligence. Mental tests. Motives. The emotions. Emotions and attitudes Personality The neuroses. Index.

Note This rather severely condensed work is designed to give the student nurse the elementary concepts of general psychology Physiological aspects of psychology are largely omitted, the emphasis being on clinical applications. The fullest chapters are on those subjects which will most closely concern the nurse in her career—emotions, personality and the neuroses. The presentation is simple and direct. Questions for discussion and suggested supplementary reading lists follow each chapter

STOKES JOHN HINCHMAN AND JANE BARBARA TAYLOR

Dermatology and venereology for nurses. Fourth edition Illustrated. Philadelphia W B Saunders Company 1948 416 p. illus. 21 cm $3 50 1327

Contents (*abridged*) Part I, Diseases of the skin The examination of the patient with a skin disease. The acute conditions involving the blood vessels (erythemas) of the skin. Skin allergy Irritants, infection, and inflammation (dermatitis, eczema) Eruptions due to animal parasites, drugs, and self-inflicted injuries. Acne, psoriasis, pityriasis rosea, lupus erythematosus Diseases of the hair and nails. Birth marks, moles (nevi) and warts. Part II, The special management of skin diseases: The methods of dermatological treatment. Diet and constitutional measures. Actinotherapy The nursing of the severe dermatoses. Dermatology of pregnancy In-

fancy and childhood. The dermatoneuroses. Part III, The venereal diseases: Gonorrhea, chancroid, lymphopathia venereum. Syphilis: history onset symptoms. The technic of treatment for syphilis. Part IV Venereal disease control and social hygiene Venereal disease in public health. Venereal disease in industry Nursing roles and technics in venereal disease control. Normal ideals of sex life. Appendix: Sources of information and advice. Glossary Index.

Note. (1947) Previous editions of this successful textbook were entitled *Dermatology and syphilology for nurses*, and were written by Stokes alone. This revision includes considerable amount of rewriting and reorganization of chapters. New material is included on such topics as the allergies, nervous disorders of the skin, the use of penicillin in venereal disease treatment, and the problems of industrial syphilology The brief bibliography includes number of recent references.

SPECIAL TYPES OF NURSING

BENZ, GLADYS SELMA

Pediatric nursing. With 119 illustrations. St. Louis The C. V Mosby Company 1948 638 p. illus. 22 cm. $4 00 1328

Contents (abridged) Unit I, The development of pediatrics: The changing attitude toward child care. History of the pediatric hospital. Interdepartmental relationships. Unit The newborn infant: Diseases and anomalies of the newborn. Infant feeding The premature infant. Unit III, Growth and development Physical growth and development. Mental, social, and emotional development. Nutrition. Play and recreation for well children. The home in the lif of the child. Unit IV Nursing care of the child: General principles of child care. Preoperative and postoperative care. Nursing care in special therapies. Nutrition of the sick child. Legal problems in pediatric nursing. Guiding of play and recreation for the child in the hospital. Nursing care in the home. Unit Diseases affecting the body systems: The ear and respiratory system. Diseases of the digestive system. Diseases of the blood, lymphatics, and cardiovascular system. The skin. Diseases of the genitourinary system. The neuromuscular skeletal system. The eye. Nutritional, metabolic, and endocrine disturbances. Unit VI, The communicable diseases. Unit VII, The child in the community References. Index.

Note An inclusive textbook written for use in schools of nursing. Although there is considerable discussion of home influences on the physical and psychological development of the child, most of the topics are discussed from the viewpoint of hospital care. The author's style is clear and to the point The text is supplemented by about 120 illustrations and by exceptionally full bibliographies

BROWN AMY FRANCES

Medical nursing with a foreword by Russell L. Cecil. Philadelphia W B Saunders Co 1945 579 p illus. 21 cm. $3.25 1329

Contents Unit I, Introduction to medical nursing: Introduction to medical nursing. Changing picture of disease conditions. Care of the critically ill patient Common medical emergencies. Unit II, Nursing in diseases of the respiratory system. Nursing in the common cold, influenza, bronchitis. Nursing in diseases of the lungs. Nursing in pneumonia. Unit III, Nursing in cardiovascular-renal diseases: Nursing in heart disease. Nursing in peripheral vascular disease. Nursing in diseases of the urinary tract. Nursing in diseases of the blood and blood forming organs. Unit IV Nursing in diseases of the digestive system. Nursing in diseases of the mouth, esophagus, and stomach. Nursing in diseases of the gallbladder and liver Nursing in diseases of the intestines Unit Nursing in nutritional deficiency diseases. Unit VI, Nursing in diseases of the skin. Unit VII, Nursing in allergy Unit VIII, Nursing in diseases of the endocrine system and metabolism. Unit IX, Nursing in diseases of the nervous system. Unit X, Psychiatric problems encountered on medical service. Unit XI, Nursing in the arthritides. Unit XII, Nursing in communicable diseases: Medical aseptic technic. Nursing in bacterial diseases. Nursing in non-bacterial infections. Nursing in pulmonary tuberculosis. Nursing in specific infectious diseases. Unit XIII, Nursing in fever therapy by Lt. Genevieve Woodbeck, A.N.C. Appendix Index.

Note The author of this text has had wide experience as teacher and supervisor of nurses. Her purpose is to give the nursing student sufficient knowledge of the methods of medical diagnosis and treatment to enable her to cooperate fully with the physician. Such topics as nutritional deficiency and Addison's disease, which require special understanding on the part of the nurse, are discussed at some length. Throughout the book emphasis is placed on the need for treating the patient as an individual, and careful chapters on convalescence, chronic illness, old age, and moribund patients are included. Chapters and main sections conclude with suggestions for further reading.

CADY LOUISE LINCOLN

Nursing in tuberculosis. Philadelphia W B Saunders Company 1948 481 p illus 21 cm. $3 75 1330

Contents (abridged) Section I, Hospital aspects The public health nurse in the tuberculosis hospital. Prevention of tuberculosis among nurses. Section II, The nurse's part in treatment and control. Anatomy and physiology of the lungs. Epidemiology of tuberculosis. Nursing in relation to medical treatment of tuberculosis. Nursing in relation to surgical treatment of tuberculosis. Section III, Nursing aspects: Tuberculosis case-finding. The nurse's part in establishing diagnosis. General nursing care of the tuberculous patient. Education of the patient and his family Nursing care in collapse therapy Nursing care of the thoracoplasty patient. Oxygen therapy Nursing responsibilities in pregnancy and tuberculosis. Nursing care in laryngeal and intestinal tuberculosis. Nursing care in tuberculosis of the bone and joint. Section IV Educational, social and other problems: Health teaching in the home. Mental hygiene. Rehabilitation of the tuberculous patient. Community tuberculosis education. The tuberculosis clinic. Records and evaluation. Appendix. Some significant dates in tuberculosis history Index.

Note Although this volume emphasizes the special nursing skills required for tuberculosis patients, it actually covers those fundamental principles of nursing which must be carried out for any long-term illness. The author describes the duties and functions of the nurse from the time of the diagnosis through the hospital stay until the patient is rehabilitated and re-established with his family The book, which is written as text for graduate and student nurses, is based on the author's personal experience, and on information gained from medical specialists and organizations concerned with tuberculosis procedures and services. Each chapter concludes with review exercises and brief bibliography

CARDWELL VIOLA E

The cerebral palsied child and his care in the home. Staff education for nurses engaged in orthopedic public health nursing. New York Association for the Aid of Crippled Children 1947 196 p illus. 23 cm. (Cerebral palsy series revision of pamphlet 1) Paper $1.00 1331

Contents (abridged) Definition and description of condition. Extent of problem. Etiological factors. Pathology Prognosis for rehabilitation. Clinical forms of cerebral palsy Physical characteristics. Personality characteristics and defects. Mental hygiene. Education. Health status and needs for care. Types of treatment and their use. Physical therapy The place of occupational therapy in the treatment of cerebral palsy The public health nurse and the cerebral palsied patient. Good body mechanics—prevention of deformities. Habit training in functional activities General hygiene. Recreation Pre-vocational and vocational guidance and employment. Appendices. Bibliography Index.

Note Cerebral palsy is one of the major causes of disability among children. This book brings together material from some of the most outstanding publications of recent years written by specialists working in different areas of the problem. Intended primarily for staff education of the nurses of the Association for the Aid of Crippled Children, the book is of value to public health nurses and others in organizations giving service to cerebral palsied patients and to all persons who deal with these children and wish to gain better understanding of the problems involved.

CROSSEN ROBERT JAMES AND FRANCES W HOFFERT

Gynecologic nursing. Third edition. With 194 illustrations including eight in color St. Louis The C. V Mosby Company 1946 256 p. illus. (part col d) 22 cm. $3.00 1332

Contents (abridged) Part I, Survey of gynecologic anatomy physiology diseases and treatment. Points in anatomy Gynecologic symptoms and their significance. Gynecologic history and examination. Pelvic infections. Tumors of the uterus. Ovarian tumors.

Malformations. Gynecologic treatment methods. Part II, Nursing care of the gynecologic patient. Assisting with the gynecologic examination. Preoperative care of the gynecologic patient. Care of the gynecologic patient in the operating room. Care following gynecologic operations. Care of patients having radiation therapy. Public health aspects of gynecologic nursing. Glossary. Index.

Note This text for student nurses conforms to the standards of the *Curriculum guide* of the National League of Nursing Education. The term 'gynecology' is used specifically to mean the diseases of women and does not include obstetrics. In this edition recent advances in such fields as endocrinology, pre- and post-operative care, the treatment of infection, and the psychological factors involved in nursing have been included. Considerable emphasis is placed on the nurses' part in the prevention or early recognition of gynecologic diseases, and on the medical supplies and equipment used in this field. The text is well illustrated and brief references to review questions are given at the end of most chapters.

DAVIS DAVID MELVIN

Urological nursing. Fourth edition Illustrated. Philadelphia W B Saunders Company 1946 212 p illus. 20 cm. $2 75 1333

Contents Anatomy and physiology of the urogenital tract. Diseases of the urogenital tract. Urinary obstruction and principles of urinary drainage. Nursing care. Urological equipment. Urological procedures. Operations, nomenclature. Index.

Note. (1944) Surgical and medical treatment of the common genitourinary disorders is covered in this little manual for student nurses. Emphasis is placed on nursing techniques and procedures, including the collection of specimens, handling of fluids, drainage, urinary drainage, and similar duties. In this edition the use of sulfonamides and penicillin in relation to urological infection is discussed at greater length, and sections on the Huggins method of treating carcinoma of the prostate and the use of the Foley catheter have been added.

DAVIS M EDWARD AND MABEL C CARMON

DeLee's Obstetrics for nurses. Fourteenth edition. Philadelphia W B Saunders Company 1947 640 p illus (part col d) 20 cm. $3.50 1334

Contents (abridged) Unit I, Human reproduction—anatomy and physiology of the reproductive system. Unit II, Nursing in pregnancy. The diagnosis of pregnancy. The hygiene of pregnancy. Disturbances of pregnancy. Toxemias of pregnancy. Psychiatric aspects of obstetric nursing. Unit III, Nursing during labor and delivery. The diagnosis of presentation and position. Conduct of labor at home. Conduct of labor in the hospital. Analgesia and anesthesia in labor and delivery. Complications during labor. Obstetric operations. Unit IV Nursing during the puerperium. Unit V Nursing during the neonatal period. The care of the newborn. The care of premature infants. Infant feeding. The disorders of the first weeks of life. Why babies die. Appendix. Glossary. Index.

Note (1943) A long established textbook for nursing schools which is comprehensive enough to be useful also as a reference book in professional nursing. Based on the view that pregnancy is a natural physiological process, the text gives major emphasis to the normal conditions of child bearing and delivery. The duties and responsibilities of the nurse from the beginning of pregnancy to the end of the puerperium are described in detail. This edition has been considerably revised and new material added, as in the sections on preventive medicine, medical psychology and psychiatry and the role of the social service worker. The text is very fully illustrated and the bibliographies and questions have been brought up to date.

FALLS FREDERICK HOWARD AND JANE R MCLAUGHLIN

Obstetric nursing. Illustrations by Charlotte S Holt. St. Louis The C V Mosby Company 1946 557 p illus. (part col d) 22 cm. $3 75 1335

Contents (abridged) Unit I, Human genesis: Survey of the field of obstetrical nursing. Anatomy. Physiology and embryology. Unit II, Management of pregnancy. Prenatal care. Diet in pregnancy. Hygiene. Unit III, Labor. Conduct of labor. Anesthesia. Home delivery. Unit IV Abnormal labor. Unit V The puerperium. Immediate care after labor. Nursery care of newborn. The premature infant. Unit VI Pathology of pregnancy: Abortion. Toxemias. Hemorrhages during pregnancy. Ectopic pregnancy. Diseases that complicate pregnancy. Glossary. Index.

Note A clearly written and well illustrated textbook for students of nursing. The authors have assumed that their readers will have had previous courses in such subjects as anatomy, physiology and general medicine. In common with modern practice, both pre- and postnatal care are discussed as well as the delivery itself. Obstetric techniques are described with exceptional fullness in recognition of the large amount of responsibility sometimes placed on the nurse in these cases.

FITZSIMMONS, LAURA W

Textbook for psychiatric attendants. New York The Macmillan Company 1947 332 p. illus 21 cm. $3.50 1336

Contents: Division I: An introduction to psychiatric nursing. Special problems associated with mental patients. Emergencies and first aid. Ward housekeeping. Hygiene and health. Special therapies. Nursing care of patients according to group classifications. Division II Treatment and procedures. Definitions and explanations. Suggested list for reference reading. Index.

Note A text for training attendants in mental hospitals in the care and welfare of patients which supplements the manual for instructors published by the Nursing Committee of the American Psychiatric Association, *A manual for training attendants in mental hospitals*, New York, 1945. It is arranged in units dealing with the various phases of hospital work which customarily come within the scope of an attendant's duties. Basic principles and procedures of caring for mental patients are included but there is no discussion of symptoms, classification, diagnosis, or therapy of mental diseases. The text could be used by persons studying by themselves in hospitals where no course for attendants is given.

HAMBY, WALLACE BERNARD

The hospital care of neurosurgical patients. Second edition Springfield Ill. Charles C Thomas 1948 156 p illus. 22 cm. $3.00. 1337

Contents: General considerations. Review of the anatomy of the structures surrounding the central nervous system. Physical aids in the diagnosis of diseases of the central nervous system. Special minor surgical procedures. Head injuries. Disorders of the cranial nerves. Intracranial neoplasms. Prefrontal lobotomy. Spinal cord lesions. Post-operative drainage. Index.

Note A brief but adequate manual for hospital nurses and house officers of hospitals who are responsible for the care of neurosurgical patients. The author's aim has been to cover basic procedures in examination and care and to indicate danger signals which should be reported to the attending physician. The new edition is nearly 50% longer than the previous work. The chapter on prefrontal lobotomy is new and there are numerous new or revised passages which show details of instruments, surgical dressings, etc. References to other literature are not provided.

HARTWELL, SAMUEL WILLARD

Practical psychiatry and mental hygiene. New York McGraw Hill Book Company, Inc. 1947 439 p 24 cm. (McGraw Hill series in nursing Lucile Petry editorial adviser) $3 75 1338

Contents (abridged) Part I, Introduction. Part II, Medical psychology: The problems of medical psychology. The physiological approach. The psychological approach. Psychological tests. The psychoanalytic school of clinical approach. The status and approach of modern psychiatry. Part III, Psychiatry. Section 1 Basic considerations. General etiology of mental disease. Symptoms of mental disease. The psychiatric case history. Section 2, Organic psychoses. General paresis. Epidemic encephalitis. Other infectious diseases in the brain and meninges. The toxic psychoses—delirious reactions. Mental diseases due to brain injuries. Psychosis associated with endocrine disorders and nutritional deficiencies. Epilepsy. Psychosis with brain tumor. Section 3 Psychogenic psychoses. Paranoia and allied states. Manic-depressive psychoses. Schizophrenia. Mental deficiency. Part IV Mental hygiene. The mental hygiene of childhood. Mental hygiene of adult life. Index.

Note: A presentation of mental disease from the viewpoint of nurses. The work is intended primarily for use as a textbook, but it

is also useful as reference book to graduate nurses. Most of the space is given to the background of psychiatric nursing. Thus there are excellent, largely non-technical descriptions of mental diseases but relatively little on practical nursing procedures. An extensive bibliography model outline for recording psychiatric histories, and glossary are included.

HEADLEE RAYMOND, AND BONNIE WELLS COREY

Psychiatry in nursing. New York Rinehart & Company Incorporated 1948 308 p 22 cm. $3 50 1339

Contents: Part I, Normal variations in human behavior: Normal variations. Sexual adjustment. Pain. Sleep. Part II, The varieties of mental illness: Mental diseases having structural pathology—infectious states—toxic psychoses—disorders resulting in mature—senile reaction patterns—new growths—miscellaneous disorders. The affective disturbances—depressions—excitements—schizophrenia and paranoia—psychoneuroses—asocial behavior. Part III, The practice of psychiatric nursing: Historical developments. The attitude of the modern nurse. Observing and recording the patient's behavior. Underlying principles. Special procedures. Appendices. Index.

Note: A practical and well-written text for the guidance of student and practicing nurses who are specializing in the field of mental illnesses. The treatment is particularly adapted to meet the needs of nurses working in mental institutions. Various types of mental illnesses are described together with outlines of special nursing procedures. A fourteen-page bibliography is included.

LEWIN PHILIP

Orthopedic surgery for nurses including nursing care. Fourth edition illustrated. Philadelphia W B Saunders Company 1947 563 p. illus. 20 cm. $3 75 1340

Contents (abridged): General orthopedic considerations. Orthopedic nursing care. Plaster of paris technic. Braces—splints—slings—aids in locomotion: crutches, canes, and walkers. Orthopedic operating room—personnel, equipment, and technic. Congenital orthopedic defects and deformities. Postural defects. Scoliosis or lateral curvature of the spine. Rickets—scurvy. Tuberculosis of bones and joints. Syphilis of bones and joints. Osteomyelitis—periostitis. Arthritis—gout. Acute anterior poliomyelitis (infantile paralysis). Spastic paralysis. Tumors of bones and joints. Traumatic, industrial, and military conditions. Adhesive plaster strapping. Fractures. Circulatory disturbances of the extremities. Disorders of metabolism and endocrine function—allergy. Unusual orthopedic conditions. Physical therapy. Special drugs and diets for orthopedic patients. Regional disturbances. Short statements regarding various orthopedic disturbances. References. Index.

Note: As in previous editions this standard text for both undergraduate and graduate courses is primarily discussion of good nursing procedures in orthopedic conditions, but considerable general and clinical material is included to provide an adequate background for sound understanding of the nursing procedures. In this edition the book has been substantially revised. Material has been added on many subjects including the Kenny method of treatment in acute anterior poliomyelitis. There are many new illustrations and the total number has been increased about twenty-five per cent. The work is about one hundred pages longer than in the third edition.

MCGRATH BETHEL J

Nursing in commerce and industry. New York The Commonwealth Fund 1946 372 p illus 23 cm. $3 00 1341

Contents: History of industrial nursing in the United States. Industrial organization and the nurse. Relationships with employers and employee organizations. The nurse's duties and responsibilities. Physical facilities of the industrial health service. A healthful working environment. A health program for every worker. Occupational accidents and hazards. Occupational disease hazards. Nonoccupational illness and accidents. Mental hygiene. Sight conservation, by Eleanor Mumford. Orthopedic nursing, by Katharine Ott. Nutrition. Problems peculiar to women in industry. Communicable disease control. Records and reports, by Hilda L. Hawkins. Rehabilitation. Workmen's compensation. Industrial welfare activities. Hourly nursing service by an outside agency, by Lucille M. Harmon. Conclusion. Appendix: Suggestions for the nurses' library. Sources of information. Equipment for the health service. Standing orders for nurses in industry. Outline for manual of policies and procedures. Formula for an industrial cleanser. Standards for maternity care and employment of mothers in industry. Equipment and technique for eye examinations. Formula for computing cost of part-time nursing service. Index.

Note: Sponsored by the National Organization for Public Health Nursing, this handbook presents comprehensive discussion of the policies, procedures, and problems of an expanding industrial health program and of the duties and responsibilities of nurses in the development of the program. The volume is intended for present and prospective industrial nurses and for company executives.

MARSH, EDITH L

Nursing care in chronic diseases. 28 illustrations. Philadelphia J B Lippincott Company 1946 237 p illus 21 cm. $3 00 1342

Contents: Definitions and problems. Problems involved. Heart disease. Arthritis. Multiple sclerosis and muscular dystrophy. Paralysis. Parkinson's disease, Huntington's chorea, acute chorea, central-nervous-system lues and diabetes. The chronically ill on service man. Care of mentally disturbed patients. Diet and nutrition in chronic illness. Physical and occupational therapy and rehabilitation. Recommendations. Index.

Note: This book, prepared by the superintendent of the Cuyahoga County Nursing Home in Cleveland, describes the specialized care and treatment required by chronically ill, aged, and bed-ridden patients; but it goes beyond mere nursing care. The author approaches the subject from sociological point of view and shows what may be accomplished by "intelligent, sympathetic and understanding nursing care." The therapeutic value of recreation and occupational therapy is discussed. Case histories are cited throughout the book.

MORRIS, EVANGELINE HALL

Public health nursing in syphilis & gonorrhea. Philadelphia W B Saunders Company 1946 239 p. illus. 20 cm. $2 75 1343

Contents: Background circumstances. Historical side lights. Syphilis. The diagnosis and treatment of syphilis. Gonorrhea. The diagnosis and treatment of gonorrhea. The patient and his needs. Epidemiology. Clinic services. Agencies at work. Family life education. Work of the public health nurse. Index.

Note: This book provides background sketch of the problems presented by venereal disease in modern American society. Written in concise and simple manner it is basically an orientation text for nursing students. It outlines the history, nature, and treatment of syphilis and gonorrhea, and describes the legal, social, and educational problems created by these diseases. The author is Associate Professor of Nursing at Simmons College.

NOYES ARTHUR PERCY, AND EDITH M HAYDON

Textbook of psychiatric nursing. Fourth edition. New York The Macmillan Company 1946 396 p. illus 22 cm. $3.50 1344

Contents (abridged): Psychiatry and psychiatric nursing. Mental mechanisms and motives. Personality types. The causes and nature of mental disorders. Symptoms of mental disease. General paresis and cerebral syphilis. Psychoses with epidemic encephalitis. Psychoses with other infectious diseases. Alcoholic psychoses. Psychoses due to drugs or other exogenous toxins. Traumatic psychoses. Psychoses due to circulatory disturbances. Psychoses with convulsive disorders (epilepsy). Senile psychoses. Psychoses with metabolic and other somatic diseases. Psychoses with tumor and other diseases of the brain. Psychoneuroses. Manic-depressive psychoses. Schizophrenia (dementia praecox). Paranoia and paranoid conditions. Psychopathic personalities. Principles of psychiatric nursing. Nursing procedures and treatments. Psychoanalysis. The nurse and her profession. History of psychiatry and of psychiatric nursing. Glossary. Index.

Note: (2814a) An established textbook for nurses who are preparing for this specialized kind of nursing. In this edition the title has been changed to indicate the increased emphasis on nursing techniques. However there is approximately the same amount of material about the nature of mental diseases.

RENDER, HELENA WILLIS

Nurse-patient relationships in psychiatry New York McGraw Hill Book Company Inc., 1947 346 p illus. 24 cm. (McGraw Hill

series in nursing, Lucile Petry consulting editor) $3.50 1345

Contents: Psychiatric nursing—meaning—objectives Behavior—observing—recording—understanding—modifying. Nursing care Remedial approach. Primary personality disorders. Special problems. Rehabilitation. Secondary personality changes. The use of art, literature, music. Appendix. Index.

Note. The main subject of this book is the psychology of nursing psychiatric patients. It is written for student nurses and graduate nurses who are preparing for this specialty and its purpose is to orient the nurse so that her attitude as well as her techniques will be conducive to her patients' recovery. Most topics are treated in detail from the viewpoint of the nurse on the job, and there are copious references to further reading. The author is Chief Nurse in the Iowa State Psychopathic Hospital.

SHEPARD KATHARINE

Textbook of attendant or practical nursing. Third edition New York The Macmillan Company 1948 506 p illus 22 cm. $4.25 1346

Contents (abridged). Part I Section I, The attendant or practical nurse as an individual. Section II, Elementary anatomy and physiology and diseases. Section III, Microorganisms and some communicable diseases. Part II: Section I, The patient and his environment in the hospital. Section II, Medical and surgical nursing. Section III, Care of the mother infant, and small child. Appendix. Suggested reading. Index.

Note (1949) A clearly written and inclusive textbook on topics in medicine, physiology nursing, and hospital organization which are of practical interest to hospital attendants and practical nurses who have not had the benefit of full-length training as nurses. It is intended primarily for use in courses organized for these members of hospital staffs, but the treatment is full enough to make the book useful for reference and home study. In preparing this edition the text was somewhat reorganized. One chapter was deleted and two new chapters have been added. The book is based on the plan of teaching followed in the Household Nursing Association School of Attendant Nursing, Boston, of which the author is Director.

HOSPITALS

AMERICAN COLLEGE OF SURGEONS

Manual of hospital standardization history development and progress of hospital standardization, detailed explanation of the minimum requirements Chicago American College of Surgeons 1946 118 p Illus. 26 cm. Paper Gratis. 1347

Note: The official statement of the minimum requirements for hospitals as established by the American College of Surgeons. The history and the progress of hospital standardization throughout the world is first covered very briefly; then the five basic clauses of the Minimum Standards are stated. The terms used are defined, and each clause is discussed in detail. A model constitution for hospital corporation and suggested by-laws, rules, and regulations for medical staffs are included at the end of the book.

BACHMEYER, ARTHUR CHARLES, AND GERHARD HARTMAN editors

Hospital trends and developments, 1940–1946 New York The Commonwealth Fund 1948 819 p. 24 cm. $5.50 1348

Contents (abridged) Current trends Hospital service. Rural hospital and health facilities. Hospital developments in foreign countries. The trustee. Hospital organization and management. The hospital administrator Medical staff organization and relationships. Nursing education and nursing service. Operating room Obstetrical service. X-ray service. Outpatient department. Special services. Medical social service. Admitting and discharge. Financial control. Legal aspects. Hospital construction. Plant maintenance. Purchasing. Food service. Housekeeping Laundry management and linen control. Personnel management. Public relations Volunteers and volunteer service. Group hospital and health insurance. Public health. Regional planning of hospital services and facilities

Note (1908) A complementary volume to the editors' *The hospital in modern society* New York, 1943 which, like the earlier compilation, contains selection of articles from wide range of periodicals. In the present volume there are 148 articles classified under the headings listed above. They have been selected from the periodical literature of 1940–1946. The book is designed for hospital administrative personnel and for students preparing for this field.

BIGLEY LORETTA I

Community clinics, the hospital outpatient department and nonhospital clinics setting up and maintaining the clinic workshop 86 illustrations. Philadelphia J B Lippincott Company 1947 276 p. Illus. 21 cm. $5.00 1349

Contents Part One, Organization, administration, general considerations: Introduction—development of the modern clinic. Standards of organization and administration. The outpatient department The patient. Medical social service. Research, records, reference libraries. Nutrition. Relation of the public-health nurse to the outpatient department. X-ray department. General conduct of the clinics. Part Two, Classification of clinics, treatment of individual and integrated units Classification of clinics. The cardiac clinic. Emergency department. Surgical clinics. Cancer and tumor clinics. Genito-urinary clinics. Maternity and child health clinics. Pediatric clinics. Eye, ear nose and throat clinics Dental clinics Clinics in industry Rehabilitation clinics. Part Three, Clinics as an educational medium An integrated program

Note The author broadly surveys the modern clinic and its work in the community Both the independent welfare clinic and those operating as the out-patient departments of hospitals are thoroughly described and discussed from the standpoint of basic planning, layout, equipment supplies, operation, management, personnel, types of patients, clinic-patient relationships, and health education for the public. The book is designed as textbook and reference manual for the orientation of hospital interns, nurses, and public health workers. Photographs of typical equipment are reproduced, and lists of selected references are provided.

BUTLER, CHARLES, AND ADDISON ERDMAN

Hospital planning. New York F W Dodge Corporation 1946 236 p Illus. 29 cm. $15 00. 1350

Contents In general. The administration department. The ward or nursing unit. The surgical unit. Maternity and children's departments. Department for communicable diseases. The X-ray and physio-therapy departments. Out-patient department. The laboratory service. The medical school hospital and allied laboratories. The small hospital. Tuberculosis sanatoria. Institutions for the care of mental cases. The nurses' residence. Service buildings Construction and interior finishes. Details of service rooms. General index.

Note: Two architects present in this guide the results of their own and others' experience in specialized architectural planning for hospital buildings. Endless consultations with medical specialists are also reflected in the volume Indeed, insistence upon cooperative planning by doctors and architects in working on hospital plans from the beginning is the keynote of the work. Basic recommendations are made for each unit discussed. There are 191 figures, most of which show floor plans and other details of modern hospital buildings already constructed. There is no discussion of the special problems of converting hospital buildings now in use, nor is there bibliography

COMMISSION ON HOSPITAL CARE

Hospital care in the United States a study of the function of the general hospital, its role in the care of all types of illness and the conduct of activities related to patient service, with recommendations for its extension and integration for more adequate care of the American public. New York The Commonwealth Fund, 1947 631 p illus. 24 cm. $4.50 1351

Contents (abridged) Foreword, by Thomas S. Gates, Section One, The organization, objectives, purpose, and method of study of the Commission on Hospital Care. Section Two, Summary of conclusions and recommendations. Section Three, Influences and trends in administrative relationships and organizational patterns that underlie the future development of hospital services Factors that have influenced the growth of hospitals. Functions of the general hospital. Hospitals and public health departments. Maintenance of standards of service. Licensure of hospitals. Hospital service for rural people. Provision of hospital service and quality of care for Negroes. Financing hospital service. Section Four Factors affecting the size, use, and need for hospital facilities: Population factors. Socio-economic factors. Geographic and transportation factors. Population density and the size of hospital communities. Measuring need for hospital facilities. Section Five, An analysis of the physical, service, and financial aspects of existing hospitals. Section Six, Suggestions for the integration of hospital service and an estimate of additional facilities necessary to serve the public needs adequately, illustrated by the planning program of one state Section Seven, The history of hospitals in the United States Section Eight, Methods of financing hospital care, legal status, and interrelationships of hospitals with governmental and voluntary health agencies Index.

Note A detailed report based on comprehensive survey of hospital service and general hospitals throughout the United States. The Commission on Hospital Care which conducted the survey was an independent, non-governmental body composed of representative leaders from many fields including education, industry agriculture, journalism, and labor as well as medicine and hospital management.

CORWIN EDWARD HENRY LEWINSKI

The American hospital. New York The Commonwealth Fund, 1946 241 p illus. 21 cm. (New York Academy of Medicine. Committee on Medicine and the Changing Order Studies) $1 50 1352

Contents: Preface, by Claude W Munger Sources of information about hospitals. The hospital domain. Hospital finance. Distribution and utilization of hospital facilities. The hospital as an employer and as training ground. Medical services. The outpatient department. Housing of hospitals. Retrospect and prospect. Index.

Note The sixth volume in series of books dealing with medicine and the changing order by the New York Academy of Medicine. The present monograph is intended as an orientation for doctors, nurses, medical administrators, and students to the problems now confronting American hospitals. The author traces the principal trends in the development of the hospital as part of the social structure, describes the various services offered, discusses many problems of plant, administration, and finance, and considers the social and organizational patterns foreshadowed for the future.

GOLDWATER, SIGISMUND SCHULZ

On hospitals New York The Macmillan Company 1947 395 p. illus. 24 cm. $9.00 1353

Contents (abridged) A biographical note Foreword. On administration and organization. Hospital and doctor Hospital, patient, and community Planning. Hospital plans.

Note. A selection from the essays, papers, and reports of the late Commissioner of Hospitals of New York City The material demonstrates the author's philosophy that hospital director needs both medical training and an ability to humanize hospital service. He considered the primary functions of hospital to be (1) care of the patient, (2) provision of means for medical education, (3) encouragement of research and his recommendations on general policies, as well as on minor items, are presented accordingly Of particular interest are the comments on the relation of the hospital to the professional staff on provisions for chronic and contagious diseases; on finances, socialized medicine, and the design of hospital buildings.

ROSENFIELD ISADORE

Hospitals integrated design. New York Reinhold Publishing Corporation, 1947 308 p illus 30 cm. $10 75 1354

Contents: Need for hospital facilities. Comprehensive planning. General considerations and functional elements. The nursing unit. Diagnostic and therapeutic facilities. X-ray and radiation therapy Laboratories, necropsy The operating department. The maternity and pediatrics departments Service departments The outpatient department. Special hospitals. The small hospital Housing and training facilities. Daylighting for hospitals. Artificial illumination. The mechanical plant f the hospital. Hospital construction. Hospital construction cost. Index.

Note. A series of lectures on the principles of hospital design as the author has come to understand them in twenty-four years of study and experience in hospital planning Originally addressed to an audience of architects and hospital administrators, they have been somewhat rewritten and are here supplemented by illustrations and transcriptions of the discussions that followed their delivery. Among the many practical features of the book is the discussion of the function and installation of equipment. The illustrations include reproductions of numerous floor plans

PERSONAL HYGIENE AND FIRST AID

AMERICAN RED CROSS

American Red Cross first aid textbook, prepared by the American Red Cross for the instruction of first aid classes. Revised. With 264 illustrations Philadelphia The Blakiston Company 1945 254 p illus. 20 cm. Paper $0.60 cloth, $1.00 1355

Contents: The why and how of first aid. Shock. Dressings and bandages. Wounds and their care. Artificial respiration and the treatment of common asphyxial accidents. Poisons. Injuries to bones, joints, and muscles. Injuries due to heat or cold. Transportation. First aid for common medical emergencies. The human body: how it is put together and how it works. First aid kits. Index.

Note: (1914[?]) The revised edition of this well known manual represents a complete re-writing of the editions of 1933 and 1937 in the light of the advance of medical science in World War II. Each of the chapters was reviewed or rewritten by a physician known for his expert knowledge of the subject; the resulting text was then reviewed and revised by the medical staffs and surgical experts of the National Research Council and of the American Red Cross. The volume serves both as a textbook for classes in first aid, for which it was primarily prepared, and as a handbook for the emergency treatment of injuries. Illustrations in the text help in the presentation of the subject matter.

COLE, WARREN H. AND CHARLES B PUESTOW

First aid, surgical and medical. Third edition. Illustrations by Carl Linden in collaboration with Tom Jones of the Illustration Studios of the University of Illinois College of Medicine, Chicago New York D Appleton-Century Company Incorporated 1945 331 p illus. 22 cm. $3.50 1356

Content (abridged) Precautions and limitations in first aid work, by W H. Cole. General principles of first aid, by W H. Cole. Anatomy and physiology, by Charles B Puestow. Bandaging, by W H Cole. Wounds, by W H. Cole. Shock—blood transfusions, by C. B. Puestow. Injuries to large blood vessels, by Odon de Takats. Transportation of the injured, by Linden Seed. Fractures, dislocations and sprains, by H. B. Thomas and F W Hark. Gas and bomb raids, by R. C. Lusk. Respiratory emergencies, by W H Cassels. Abdominal emergencies, by W C Beck. Emergencies of the genito-urinary tract, by C. M. McKenna and J. H Kiefer. Injuries of the scalp, skull, spine and nervous system, by E Oldberg and P Bailey. Medical emergencies, by R. W Keeton and M. M Montgomery. Civilian versus military casualties, by C. B. Puestow. References. Index.

Note (1912[?]) A relatively inclusive book on this subject. It is intended to be of practical value not only to laymen who are taking training in first aid, but also to nurses and physicians. Some of the material is more advanced than is commonly included in books on first-aid treatment. However care is taken throughout the text to point out where first-aid treatment should be given only as a precautionary measure, or not at all, and the injured or ill person turned over to a physician. Although the present edition was published only two years after the second edition, significant changes were made. These have to do with such topics as new treatments for burns and shock, and a discussion of the Eve method of artificial respiration.

DIEHL, HAROLD SHEELY

Textbook of healthful living. Third edition. New York McGraw Hill Book Company, Inc. 1945 707 p illus. 21 cm. $3 50 1357

Contents: Possibilities of longer life and better health. Major health problems. Nutrition and growth. The choice of foods. Weight and its control. Digestive disturbances. Dietary dangers. Stimulants and narcotics. Exercise—fatigue—rest. Sunlight and fresh air. Specific disease prevention. Colds and influenza. Care of the nose, throat, and ears. The conservation of vision. Sound teeth. Care of the skin and hair. Glands of internal secretion. Normal sex life. Modern parenthood. Mental health. Health problems of advancing years. Choosing a health adviser. Community health. Organized health work. Appendices. Index.

Note An inclusive manual of personal hygiene. Its first edition, published in 1935, was designed for the general reader but beginning with the second edition changes were made to adapt it to use in introductory college courses. It is now used both as a textbook and a simple reference book for lay readers. A very wide range of topics is discussed. Simple terminology is employed in the main part of the book; but the appendix contains a series of condensed summaries of information about specific diseases, and these are cast in technical terminology. The present edition contains a fair number of revisions, most of which have to do with statistical information or with new knowledge discovered between 1939 and 1945.

ELIASON ELDRIDGE LYON

First aid in emergencies. Twelfth edition 126 illustrations. Philadelphia J B Lippincott Company 1948. 260 p. illus. 17 cm. $2.50 1358

Contents. General considerations. Surgical principles and supplies. Wounds. Hemorrhage (bleeding). Heat and cold effects. Sprains, dislocations and fractures. Unconscious conditions and fits or convulsions. Suffocation. Poisons. Medical emergencies. Infectious transmissible diseases. Abdominal pain. Index.

Note This pocket-sized manual offers a concise and practical guide to the treatment of ordinary emergencies. It is written for the layman, fireman, policeman, lifeguard, factory worker, etc., and the instructions for the care of an unconscious person, bandaging, treatment of wounds, etc., are given clearly and simply. This edition differs little from the preceding edition. The section on burns has been brought up to date, and there is a new paragraph on the treatment of barbiturate intoxication.

VAN BUSKIRK, EDGAR FLANDREAU

Principles of healthful living for the individual and the community Edited by Carl L. Kline. New York The Dryden Press 1948 474 p. illus. 21 cm. $3.50 1359

Contents: Part One, Basic concepts: Our environment. A survey of the human organism. Part Two, Emphasizing the individual aspects of healthful living: Vision and hearing. The skin and the teeth. Bodily movement and posture. Activity and relaxation. Air and breathing. Diseases of the respiratory system. Foods. The digestive system. The circulatory system. The excretory system. Part Three, Emphasizing health in human relationships: The continuation of life. Control and integration of the body. Mental health. Mental handicaps. The progress of medicine. Family health. Disease control in family and community. Public-health agencies. One hundred books suited for supplementary reading. Index.

Note An elementary but inclusive text which is designed primarily for use in personal hygiene courses in colleges. The style is largely non-technical, and the book is organized to facilitate reading. It is, therefore, suitable for lay readers also. Among the changes in this edition is addition of the chapters on family and community health.

PSYCHOSOMATIC MEDICINE

Alexander, Franz, and Thomas Morton French

Studies in psychosomatic medicine, an approach to the cause and treatment of vegetative disturbances. New York The Ronald Press Company 1948 568 p illus. 24 cm. $7.50 1360

Contents: Part I, General principles: Fundamental concepts of psychosomatic research, by F Alexander Present trends in psychiatry and the future outlook, by F Alexander. Training principles in psychosomatic medicine, by F Alexander Physiology of behavior and choice of neurosis, by T M. French. Hypothalamic functions in psychosomatic interrelations, by R. R. Grinker A note on the psychogenesis of organic symptoms, by L. J. Saul The physiological effects of psychoanalytic therapy by L. J Saul. Part II, Disturbances of the gastrointestinal tract: Psychologic factors in gastrointestinal disturbances—a symposium, by F Alexander C. L. Bacon, G. W Wilson, H. B Levey and M. Levine. A case of peptic ulcer and personality disorder by F Alexander The relation of persecutory delusions to the functioning of the gastrointestinal tract, by F Alexander and W C. Menninger A study of mechanisms in two cases of peptic ulcer by C Van der Heide. The transition from organ neurosis to conversion hysteria, by G W Wilson. Part III, Disturbances of the respiratory system Bronchial asthma in children, by M. W Gerard. Psychotherapy in bronchial asthma, by T M. French and A M. Johnson. Report of case of acute laryngitis occurring as conversion symptom during analysis, by G. W Wilson. A study of structural and instinctual conflicts in cases of hay fever by G. W Wilson, Part IV Cardiovascular disturbances Emotional factors in essential hypertension, by F Alexander Psychoanalytic study of case of essential hypertension, by F Alexander. Blood pressure findings in relation to inhibited aggressions in psychotics, by M. L. Miller The status of the emotions in palpitation and extrasystoles with note on effort syndrome by M. L. Miller and H. V McLean. Hostility in cases of essential hypertension, by L. J Saul. Part Endocrinology and metabolism A psychosomatic study of hypoglycemic fatigue, by F Alexander and S. A. Portis. Correlations between emotions and carbohydrate metabolism in two cases of diabetes mellitus, by A. Meyer L. N. Bollmeier and F Alexander Part VI, Skin diseases: A psychological study of case of eczema and case of neurodermatitis, by M. L. Miller Incidental observations on pruritus ani, by L. J. Saul. The emotional settings of some attacks of urticaria, by L. J. Saul and C Bernstein, Jr Part VII, Joints and skeletal muscles: The psychogenic tic in ego development, by M. W Gerard. Preliminary report on psychosomatic study of rheumatoid arthritis, by A. M. Johnson, L. B. Shapiro, and F Alexander Part VIII, Miscellaneous studies Enuresis—a study in etiology by M. W Gerard. Attitude after ventriculography by M. Grotjahn and T M French. A case of migraine, by A. M. Johnson A clinical note on mechanism of psychogenic back pain, by L. J Saul. Some observations on the relations of emotions and allergy by L. J Saul. Glossary, from Ten year report by the Institute for Psychoanalysis. Index of names. Subject index

Note An authoritative collection of research papers written by twenty staff members of the Institute for Psychoanalysis in Chicago. Most of the papers appeared originally in various scientific and medical journals, and are collected here mainly for the convenience of medical practitioners and psychiatrists, but also for the education of laymen.

Dunbar Helen Flanders

Emotions and bodily changes a survey of literature on psychosomatic interrelationships 1910–1945 Third edition with supplementary introductions and additional bibliography New York Columbia University Press 1946 604 p 24 cm. $8 00 1361

Contents Part One, Orientation and methodology Problem of integration and differentiation. Problems of acute and chronic illness. Problem of measurement. Part Two Organs or organ-systems General considerations relating to organs or organ-systems. Nervous system. Musculature. Endocrines. General metabolism and heat regulation. Cardiovascular system. Respiratory system, including oto-rhino-laryngology Gastrointestinal system. Genitourinary system and gynecology Special sense organs exclusive of skin. Skin. Bones, including odontology Part Three, Therapeutic considerations and concluding remarks Bibliography Index of names. Subject index.

Note (1935a) Essentially this work is an abstract of the published literature that has significance to psychosomatic medicine and related fields. In each of the chapters articles containing contributions to the topic of the chapter are summarized, and numbered references are made to the bibliography The bibliography which is organized under the same headings as the chapters, gives full references, including titles of the articles, to the original publications. The main body of the work has not been changed in this edition, but the chief developments since 1938 are reviewed in an eighteen-page introduction and forty-one references have been added to the bibliography

Dunbar Helen Flanders

Mind and body psychosomatic medicine. New York Random House, 1947 263 p. 21 cm. $3.50 1362

Content The child you were. Delayed-action mines of childhood. The beloved symptom. The doctor looks at the patient The patient looks at the doctor The patient's dilemma. The doctor's dilemma. The accident habit. The mind and the heart. "The hygiene of quiet mind Mental indigestion. Allergy can mean. Failure in chemistry Half in love with death. The compleat patient. Index.

Index. The author' successful experience in many phases of psychiatric practice and teaching serves her well in this explanation of psychosomatic medicine to the layman. The scientific relationship of the mind to bodily ills is presented simply and clearly and the psychiatric procedures to effect cures are indicated although not explained in technical detail. Particular attention is given to the possibility of emotional causes of heart disease accidents, diabetes, hypertension, the allergies and stomach ulcers, although the author is careful to insist that psychiatry is neither cure-all nor technique to be handled casually by the inexperienced. Throughout the book the topics discussed are well illustrated by brief case histories.

Dunbar, Helen Flanders, and others

Synopsis of psychosomatic diagnosis and treatment with the assistance of J Arlow, R. Hussey, B Lewin, R. C Lowe, S Rubin E. Schneider L. W Sontag and members of the staff of the departments of medicine and psychiatry Columbia Presbyterian Medical Center New York City St. Louis The C. V Mosby Company 1948 501 p. illus. 20 cm. $6.50 1363

Contents: Part I, Introductory—embryology and chronology Determinants of predisposition to psychosomatic dysfunction and disease—problem of proneness to psychosomatic disorder Introductory—nervous and locomotor systems. Part II, Gastrointestinal system. Vasomotor trophic, oral, and skin disorders—skin as an end organ of somatic equivalents of psychic processes. Eye ear nose, throat,

and dentition. Metabolic and endocrine disturbances. Arthritis—rheumatoid arthritis. Circulatory system. Respiratory system. Genito-urinary disorders. Infectious diseases. Diseases due mainly to extrinsic factors. Part III, Introductory—disturbances in function. The neuroses and their accompaniment in physical dysfunction. Industrial medicine—preventive medicine. Pediatrics, geriatrics and therapy. Bibliography.

Note: A condensed presentation of present-day psychosomatic medicine. It is directed especially to general practitioners, and its purpose is to enable these medical men to apply some of the principles of psychosomatic medicine in treating their patients. Among the different phases studied some are presented in much greater detail than others. The section on metabolic and endocrine disturbances is especially full. Although intended as a practical handbook, there is a bibliography of 432 references to which statements in the text are carefully keyed.

HINSIE, LELAND EARL

The person in the body an introduction to psychosomatic medicine. New York W W Norton & Company Inc., 1945 263 p. 21 cm. $3.50 1364

Contents: The interdependence of mind and body. The force of emotional growth. The roots of psychosomatic medicine. The inner man emerges. Psychological versus organic sex. The search for recognition. Sex becomes vitalized. Varieties of psychosomatic syndromes. Illness as a defense against homosexuality. Marriage as a cure for sickness. The body protects the person in it. Types of neurotic personalities. The introvert. The extravert. The epileptoid person. The change of life. The role of environmental forces. Your part in psychotherapy. Index.

Note. An elementary but authoritative presentation for general readers, particularly those who are being treated for physical disorders based upon emotional disturbances. Its purpose is to delineate some of the ways in which emotions can bring about illnesses that appear to be physical, and to do so in language that the patient can understand. Case histories as such are not presented but the author has drawn frequently upon records of actual cases to illustrate his points. Also, the book provides for anyone interested good insight into the philosophy and methods of this new branch of medicine.

PSYCHIATRY

ALEXANDER, FRANZ

Fundamentals of psychoanalysis. New York W W Norton & Company Inc., 1948 312 p 22 cm $3 75 1365

Contents: The position of psychoanalysis in medicine. The nature of psychological understanding. The basic principles of psychodynamics. The concept of sexuality. The functions of the ego and its failures. Sociological considerations. The psychology of dreaming. Unconscious factors in wit and aesthetic appeal. Psychopathology. The principles of psychoanalytic therapy. Index.

Note A relatively concise presentation of current psychoanalytical concepts. It has been developed from lectures given by the author in an introductory course at the Chicago Institute of Psychoanalysis, and it is so presented as to be clear not only to students but to lay readers as well.

ALEXANDER, FRANZ AND OTHERS

Psychoanalytic therapy principles and application by Franz Alexander and others. New York The Ronald Press Company, 1946 353 p 22 cm. $5.00 1366

Contents Part 1, Principles of psychoanalytic therapy: The scope of psychotherapy. The development of psychoanalytic therapy. The principle of flexibility. The principle of corrective emotional experience. The transference phenomenon. Indications for therapy. Planning psychotherapy. The dynamics of the therapeutic process. Part II, Application of psychoanalytic therapy: Efficacy of brief contact. Emotional readjustment in supportive therapy. Control of the transference relationship. Analyses of character disturbances. Alleviation of rigid standards. Corrective emotional experience through rapport. Variations in goal and technique. The use of narcosynthesis in war neuroses. Conclusions and outlook. Selected reading list. Index.

Note The introductory chapters of this work constitute concise account of the evolution of psychotherapy through the years, leading to the development of Freud' "transference neurosis" This latter principle, considerably expanded and refined in recent years, is shown throughout the remainder of the book to be the dominant feature of modern therapy Stress laid on the importance of flexibility in all procedural aspects of treatment, and some twenty case histories are included in moderate detail to illustrate the principles set forth. Though not difficult reading, the book is directed toward more specialized public than the layman and should be of greatest value and interest to students and professional workers in the various psychiatric areas. The authors and their associates are staff members of the Institute for Psychoanalysis, Chicago.

ASSOCIATION FOR RESEARCH IN NERVOUS AND MENTAL DISEASE

Military neuropsychiatry proceedings of the Association, December 15 and 16 1944 New York editorial board Franklin G Ebaugh, Harry C Solomon, and Thomas E. Bamford Jr with 34 illustrations and 48 tables. Baltimore The Williams & Wilkins Company 1946 366 p (Research publications. Vol. 25) $6 00 1367

Contents Changing concepts of psychoneurosis in relation to military psychiatry by J C Whitehorn. Neurotic reactions in psychopaths (hysteria-malingering) by N Q Brill and M J Farrell. A dynamic study of war neuroses in flyers returned to the United States, by R R Grinker. Psychiatric contrasts in the two world wars, by E A Strecker and K E Appel. The development of psychiatry in the British army by J R Rees. Research aspects at the AAF School of Aviation Medicine in nervous and mental disorders, by E O Roberts. Emotional problems of demobilization, by G. B Chisholm. The problem of the discharged neuropsychiatric patient, by W C Menninger. The mental hygiene unit practical approach to the utilization of the mild psychoneurotic in the armed forces, by L. L. Robbins. An experimental unit for the retraining of psychoneurotic soldiers, by F F Sauerchle, Jr. Psychiatric reaction to amputation, by G. C. Randall, J R. Ewalt, and H. Blair. Anxiety in aerial combat, by D G. Wright. A note on the etiology of combat incurred neuroses, by J. W Appel. Concerning combat exhaustion, by L. J Thompson. Neuropsychiatry in an overseas evacuation hospital, by R. T Collins. The importance of the emotional outlet in psychotherapy by H. L Harris. Psychopathology and group therapy by H. P Rome. Methods of recovery in combat fatigue and the influence of therapy by O. N Raines, L. B Hohman and L. C. Kolb J Psychotherapy in naval convalescent hospital, by M. M. Pearson and R. A. Cohen. The therapeutic role of drugs in the process of repression dissociation and synthesis, by L. S. Kubie and S. Margolin. The electro-encephalogram in war wounds of the brain; with particular reference to post-traumatic epilepsy by E. Rasmussen and B Woodhall. Cranio-cerebral injuries of personnel involved in aircraft accidents, by G. M. Hass. The response of muscle to electrical stimuli during degeneration, denervation and regeneration, by L. J Pollock, J G. Golseth and A. J. Arieff Psychiatric procedure in the Rehabilitation Center Second Service Command, by H. B Snow Convalescent reconditioning program for neuropsychiatric casualties in the U S. Army by W E. Barton. Neuropsychiatric problems of the Veterans Administration, by J H. Baird. Mental illness and the expanded federal-state vocational rehabilitation program, by D A. Clark and V H. Vogel. Psychiatric rehabilitation in industry by L. E. Himler. Personality and psychosomatic disturbances in patients on medical and surgical wards: survey of 450 admissions, by B. Mittelmann A. Weider, K. Brodman, D Wechsler and H. G. Wolff. The development of group psychotherapy in military setting, by D A. Shaskan The psychiatric treatment program at Welch Convalescent Hospital, by J M. Cotton. Neuropsychiatric rehabilitation problems of discharged veterans in rural communities of the South, by M. H. Greenhill and H. Lowenbach. Modification of the Rorschach method for large scale investigations, by M. R. Harrower-Erickson. Index.

Note. The papers in this collection are addressed to professional psychiatrists and physicians. Bibliographic references and transcriptions of the discussions that followed their readings have been added to many of them.

BELLAK, LEOPOLD

Dementia praecox the past decade a work and present status a review and evaluation. Foreword by Winfred Overholser New York Grune & Stratton 1947 456 p. illus. 23 cm. $10 00 1368

Content (abridged) Vital statistics. Etiology pathogenesis, and pathology Diagnosis and symptomatology Physiological studies. Psychological studies. Insulin treatment. Metrazol treatment. Electric shock treatment. Miscellaneous studies on various and combined shock treatments. Miscellaneous forms of somatic therapy. Psychotherapy Prognosis. Prevention. Dementia praecox in childhood Appendix Possible etiological factors of dementia praecox. Index.

Note An interpretative summary of the pertinent literature published in the decade 1936–1946. The author states that it was based on abstracts of 3,200 papers which were published originally in variety of languages. The accounts of developments are presented as running text and specific statements are identified with the source of the information only by mention of the authors' names, less precise method than the usual schemes of identification by number or by combination of author's name and year of publication. Also original titles of articles published in foreign languages are not given in the original language but are all translated into English. In spite of these defects, however the book is useful guide to the literature. The author' own critical comments add considerable value.

BENEDEK THERESE

Insight and personality adjustment, a study of the psychological effects of war Revised

printing. New York The Ronald Press Company 1948 305 p. 22 cm $4.00 1369

Contents: Part I, The individual The development to love. Marriage. Psychodynamics of separation Part II, The soldier Adjustment in the service—the double orientation. Developmental influences of army life. The emotional situation at returning. Failures of adaptation after returning. Part III, The family in war Mothers and sons. Fathers and sons Siblings and the veteran. Soldiers and wives—during separation. Veterans and wives—marital readjustment after war-time separation. Mourning for the soldier The disabled veteran. Parenthood in war Fathers and children. Part IV Men, women—the changing sexual mores: Adolescents in war-time. The background of the women of today Women in the armed forces. The struggle between the sexes. Index.

Note A book with World War in its background. It is written mainly as guide for social workers, psychologists, vocational guidance counselors, teachers, and physicians, whose professional duties include those of helping others, particularly soldiers and recently returned veterans, to achieve harmonious emotional balance. The work, however is so simply and clearly written that it can be readily understood and used to advantage by the average individual concerned with his own mental health. The author is associated with the Institute of Psychoanalysis of Chicago.

BERGLER, EDMUND

The battle of the conscience a psychiatric study of the inner working of the conscience. Washington, D C Washington Institute of Medicine, 1948 296 p. illus 22 cm. $3 75 1370

Contents (abridged) Origin of the pre-stages of conscience. Normal and neurotic feeling of guilt. A great poet' opinion of the development of the conscience. *A few typical examples of neurotic guilt*, including suicide. Tender love—the classical normal antidote for feeling of guilt. Other normal antidotes: work, sublimation, rationalization, "pathos. Identification and sense of inner guilt. "Poetic justice" and the unconscious background. Torturing dreams and insomnia caused by inner guilt. The neurotic who unconsciously bargains for the electric chair: the criminal. "Let your conscience be your guide"—especially in the atomic age

Note: In this book an internationally known psychiatrist discusses the "inner conscience, the influences which mold it, and its effect upon behavior The working of the conscience in normal personalities, neurotic personalities, and criminotic personalities is explained with many quotations from histories. The treatment is nontechnical. The book is of interest not only to professional psychiatrists but to students and to laymen who have had some previous introduction to the field. There is fair number of bibliographical footnotes but no index.

BRENMAN MARGARET AND MERTON M GILL

Hypnotherapy a survey of the literature. With appended case reports and an experimental study New York International Universities Press, 1947 276 p 24 cm. (The Menninger Foundation monograph series. No 5) $4.50 1371

Contents: Introduction. The historical development of hypnotherapy Methods of inducing and terminating hypnosis. Susceptibility to hypnosis Therapeutic applications. The theory of hypnosis. Summary and statement of problems. Four case studies An experimental study Bibliography to: Hypnotherapy—a survey of literature. Bibliography to Four case studies. Bibliography to An experimental study Index.

Note. The first part of this work is survey and digest of the international literature pertaining to the use of hypnotic techniques as psychotherapy It was published separately in 1944 by the Josiah Macy Jr Foundation and distributed to psychiatrists and psychologists in the United States armed forces. The four case studies illustrate the use of hypnosis in four various types of mental disorders. These cases have been published separately in periodicals. The third part contains hitherto unpublished report of an investigation conducted by the senior author into the effects of the "counter system" created in hypnosis upon behavior in the normal state. The experiments described were conducted and the report was prepared as thesis in partial fulfillment of the requirements for Ph D. degree at the University of Kansas. Both authors are staff members of The Menninger Foundation of the University of Kansas

BURTON ARTHUR, AND R E. HARRIS

Case histories in clinical and abnormal psychology New York Harper & Brothers 1947 680 p illus. 21 cm. $4 00 1372

Contents: The major functional psychoses. The psychoneuroses and *psychosomatic conditions. The mental disorders* with brain damage. The mental deficiencies. The primary behavior (conduct) disorders. The emotional problems of childhood. The special disabilities. Personnel counseling. Index.

Note: The case histories collected in this volume were selected to illustrate wide range of mental aberrations. Stress is laid on the administration and interpretation of tests with explicit illustrations of their diagnostic relationships to the patients' symptoms. There is comparatively little on the etiological and therapeutic aspects. The work is intended as supplementary text for advanced *students and beginning clinicians.*

CAMERON, NORMAN ALEXANDER

The psychology of behavior disorders a biosocial interpretation Boston Mass. Houghton Mifflin Company 1947 622 p. illus. 22 cm. $5 00 1373

Contents: Introduction. Personality development and behavior disorders. Behavior organization and behavior pathology Language, thought and role-taking in behavior disorders. Need, frustration, and conflict. Basic adjustive techniques. Hypochondriacal disorders. Fatigue syndromes. Anxiety disorders. Compulsive disorders. Hysterical disorders—Inactivation—Autonomy Delusions and hallucinations in behavior disorders. Paranoid disorders. Schizophrenic disorders. Manic and depressive disorders. Behavior disorders and cerebral incompetence. Therapy as biosocial behavior Index.

Note: A presentation of the neuroses and psychoses from the biosocial as opposed to the psychosomatic approach that is, the author deals with behavior problems as the reactions of human organisms in social field, thus breaking sharply with both the classical behaviorists and the psychosomatic dualists. Following the United States Army classification of neuroses and psychoses, he recognizes eight main groups of behavior disorders and proceeds to describe them, using brief case histories at frequent intervals as examples. Emphasis is placed upon social and cultural factors, and the interaction between the human organism and its social habitat. Footnotes contain bibliographical references.

CAMPBELL, JOHN DUVAL

Everyday psychiatry concise, clinical, practical designed for practitioners and students. Philadelphia J B Lippincott Company 1945 333 p. 24 cm. $6 00 1374

Contents. Practical psychiatry Intelligence and mental deficiency Conscience and psychopathic personality Aggressive psychopathic personality Etiology and treatment of psychopathic personality Emotional stability and psychoneurosis. More psychoneurotics. Etiology of psychoneurosis. Treatment of psychoneuroses. Psychosexual development and the homosexual personality Conscience and schizoid personality Emotional reaction and cycloid personality Chronic alcoholism. Personality examination. Rehabilitation. Index.

Note. The author of this book began his medical career as general practitioner and later took up the study of neurology and psychiatry, in which study he gained an understanding of cases that had baffled him in general practice. Here, he has written book for other general practitioners who have not studied psychiatry He explains psychiatric principles and discusses practically the problems of recognizing, classifying, and treating mentally abnormal patients. The book is written clearly and is relatively free of advanced technical terminology Typical psychopathic personalities are described in numerous case histories, many of which are drawn from the author's experience as psychiatrist with the United States Navy A second edition was scheduled for publication in 1949

COBB STANLEY

Foundations of neuropsychiatry Fourth revised and enlarged edition of the work formerly known as *A preface to nervous disease.* Baltimore The Williams & Wilkins Company 1948 260 p. illus. 23 cm. $2.50 1375

Contents. Autonomic nervous system. Segmental and suprasegmental aspects of the cerebrospinal nervous system. Motor integration and locomotion. Functional localization in the cerebral cortex. Consciousness and the "mind-body" problem. Cerebral circulation. Cerebrospinal fluid. General neuropathology. The peripheral nerve and neuritis. Special neuropathology. Epilepsy. Some psychological concepts important in medicine. Psychopathology. Index.

Note (1942) A brief work designed for advanced students of medicine and general practitioners. It defines basic terminology, describes the anatomy and physiology of the nervous system, and correlates them with the chief nervous disorders. References are included to more comprehensive writings. In this edition the work has not been widely rewritten, but there are a number of important minor changes in the text, and a few additions have been made to the bibliography.

DEUTSCH, HELENE

The psychology of women a psychoanalytic interpretation. Volume two Motherhood. New York Grune & Stratton, 1945 498 p. 22 cm. $5.00 1376

Contents. Social and biologic aspects. Motherhood, motherliness, and sexuality. The preliminary phases. The psychology of the sexual act. Problems of conception—psychologic prerequisites of pregnancy. Pregnancy. Delivery. Confinement and lactation—first relations with the child. The mother-child relation. Unmarried mothers. Adoptive mothers. Stepmothers. Epilogue. The climacterium. Bibliography. Index.

Note (1945) The first volume of this work covered development of the feminine psyche from girlhood through early maturity, with special emphasis on the problems of pre-adolescence and on the psychological importance of the formative period. The present volume deals with normal, adult womanhood. Aberrant behavior is referred to only as needed in clarification of the norm. Two more volumes are planned in which the author intends to explore the psychological influences of environment, and to make a comprehensive survey of abnormal behavior. The work is addressed to educated lay readers as well as to psychologists and physicians. The viewpoint is Freudian.

DORCUS, ROY MELVIN AND G WILSON SHAFFER

Textbook of abnormal psychology Third edition. Baltimore The Williams & Wilkins Company 1945 547 p illus. 23 cm. $4.00 1377

Contents. The field and scope of abnormal psychology. Sensory disorders. Motor disorders. Disorders of association and memory. Theories of disorders of the central functions. Desires, feelings, and emotions. Sleep, dreams, and hypnosis. Classification of mental diseases—organic psychoses and epilepsy. Functional psychoses. Psychoneuroses. Mental deficiency and psychopathic personality. Treatment by physical and chemical means. Psychotherapy. Bibliography. Index.

Note (1944) A standard and widely used textbook. It is designed particularly for medical students and advanced students of psychology, and technical terminology is used freely. The authors have approached their subject by treating aberrant behavior as an exaggerated expression of normal functioning. The authors also have attempted to balance and combine their discussion of purely functional mental disorders with their treatment of organic aspects of abnormal behavior in order to indicate the close relationship between the two. Three hundred sixty-five new references and approximately 85 pages of new text have been incorporated in the third edition, and other revisions have been made to bring the work in line with recent research results. The bibliography now contains references to 835 articles and books.

FENICHEL, OTTO

The psychoanalytic theory of neurosis. New York W W Norton & Company Inc., 1945 703 p 24 cm. $8.50 1378

Contents. Part One, Preliminary considerations. Introductory remarks on psychoanalysis and the theory of neurosis. The dynamic, the economic, and the structural points of view. The method of psychoanalysis. The archaic ego. Development of instincts, infantile sexuality. The superego. Part Two, Psychoanalytic theory of neurosis. Traumatic neuroses. The motives of defense. The mechanisms of defense. The direct clinical symptoms of the neurotic conflict. Anxiety as neurotic symptom. Conversion. Organ neuroses. Obsession and compulsion. Pregenital conversions. Perversions and impulse neuroses. Depression and mania. Schizophrenia. Defenses against symptoms, and secondary gains. Character disorders. Combinations of traumatic neuroses and psychoneuroses. The clinical course of neuroses. Therapy and prophylaxis of neuroses. Bibliography. Index.

Note The present volume is a new book written to replace the author's *Outline of clinical psychoanalysis*, New York, 1934. It is an encyclopedic treatise on the theory of neurosis from the standpoint of psychoanalysis. It includes a treatment of the mechanisms common to all neuroses and a treatment of the characteristic features of the individual neuroses. The bibliography is a selected list of 1646 references to books and articles on the psychoanalytic theory of neurosis through 1945 in the English and German languages.

GRINKER, ROY RICHARD AND JOHN P SPIEGEL

Men under stress Philadelphia Blakiston, 1945 484 p 24 cm. $5.00 1379

Contents (abridged) Part I, The men. Part II, The environment of combat. Part III, The reactions to combat—morale. The neurotic reactions to severe combat stress. Psychodynamics. Treatment and results. Part IV, The reactions after combat. The syndrome of "operational fatigue" (war neuroses) in returnees. Passive-dependent states. Psychosomatic states. Guilt and depression. Aggressive and hostile reactions. Psychotic-like states. Treatment: psychotherapy—narcosynthesis—adjunctive, and results. Part V, Civilian applications. References. Index.

Note A non-technical but not superficial account of the emotional and nervous disorders produced in air crew members by the strain of combat flying and of the methods by which they were treated. The authors' observations and deductions are based on the clinical examination and treatment of thousands of cases of war neuroses which developed among members of the United States Army Air Forces. With considerable emphasis on the use of narcosynthesis, some 65 case histories, including some non-combattants, and varying from simple operational fatigue to the most severe mental and nervous disorders, are briefly outlined. Each history sketches the man's problem, the treatment used, and the results obtained. The authors are outstanding psychiatrists, and the book is of interest to both military and civilian practitioners of this medical specialty and to social workers and laymen.

HOSKINS ROY GRAHAM

The biology of schizophrenia. New York W W Norton & Company Inc. 1946 191 p. 21 cm. $2.75 1380

Contents. Section One, The biology of man in relation to schizophrenia. Section Two, The pattern of schizophrenia. Section Three, Psychosomatic aspects of schizophrenia. Section Four, A biological appraisal of schizophrenia. Bibliography. Index.

Note An amplified version of the three Salmon Memorial Lectures presented at the New York Academy of Medicine in 1945. It is based primarily upon the results of eighteen years research at the Worcester State Hospital, research which has been primarily biological in nature. Psychosis is surveyed primarily as a manifestation of evolution. The author begins with basic evolutional units, the emergence of life, through more complex animal forms, to heredity, instincts, consciousness, the combination of ego and social in man, sex, libido, etc. This is followed by a description of schizophrenic personality as observed at the Hospital. The author suggests that in earlier stages of evolution death rather than schizophrenia would have occurred. He then discusses glands, carbohydrate metabolism, equilibrium, homeostasis, etc., in schizophrenia. He concludes there are changes at the level of cellular activity which indicate biological immaturity possibly originating in the hypothalamus and that psychiatric treatment is largely palliative.

KALINOWSKY LOTHAR B., AND PAUL H. HOCH

Shock treatments and other somatic procedures in psychiatry New York Grune & Stratton 1946 294 p 22 cm. $4.50 1381

Contents. Introduction, by N. D. C. Lewis. Historical development. Insulin shock treatment. The convulsive therapies. Pharmacologic convulsive treatment. Electric convulsive therapy. Combined insulin-convulsive treatments. Other somatic nonsurgical treatments and their relation to the shock treatments. Prefrontal lobotomy and its relationship to shock therapy. Theoretical considerations. Bibliography. Index.

Note An outline of various practical and scientific aspects of the relatively new shock treatments in psychiatric disorders. The authors,

both of them psychiatrists with wide experience in the use of these treatments, have elected to discuss in their text only what they consider to be the important aspects, but they have included a bibliography that runs to 37 pages and includes references to many topics not treated fully in the text.

KANNER, LEO

Child psychiatry With prefaces by John C. Whitehorn Adolf Meyer and Edwards A Park. Second edition. Springfield Ill. Charles C Thomas 1948 752 p. 26 cm. $8.50 1382

Contents (abridged) Part One, History of child psychiatry: Outline of the history of child psychiatry Child psychiatry and pediatrics. Part Two, Basic orientation Age. Physical condition. Intelligence. Emotion. Personality The material environment. Part Three, Clinical considerations: Initial contact. The case history Orienting considerations. Projective methods. Psychotherapy Situational therapy Psychiatric social work. Prevention. Part Four Phenomenology First section, Personality problems arising from physical illness: Anomalies, diseases, and injuries of the brain. The epilepsies. The endocrinopathies. Second section, Psychosomatic problems: The central nervous system. The circulatory system. The respiratory system. The digestive system. The muscular system. The urinary system. Third section, Problems of behavior: Problems of eating behavior Problems of sleeping behavior Problems of speech and language. Problems of scholastic performance. Problems of sexual behavior Anxiety attacks. Hysteria. Delinquency Schizophrenia. Suicide. Author index. Subject index.

Note. (1939) The first edition of this work established it as an important contribution to the literature of its subject. It is based on extensive experience and study of large numbers of children at the Harriet Lane Home and the Henry Phipps Psychiatric Institute of Johns Hopkins University and on the experiences of private practitioners and community child care agencies such as schools, welfare groups, courts, custodial and correctional institutions, and hospitals. It covers the field thoroughly both in regard to general principles and to details of specific conditions and situations. In the new edition the work is 223 pages longer than in the first edition. furthermore the whole content has been so thoroughly rewritten and augmented that it can rightfully be called a new work on the general plan of the old one. The author's main thesis that all relevant facts must be considered in treating children's psychiatric problems has not changed.

KAPLAN OSCAR J editor

Mental disorders in later life. Stanford California Stanford University Press 1945 436 p illus. 24 cm. $5 00 1383

Contents: Introduction by K. M. Bowman. A statistical review of mental disorders in later life, by H. M. Pollock. Physiological aspects of mental disorders in later life, by M. W Shock. Psychological aspects of mental disorders in later life, by H. E. Jones and O. J Kaplan. Sociological aspects of mental disorders in later life, by H. W Dunham. Mental health and nutrition in old age, by L. E Wexberg. Neuroses of later maturity by N Cameron. The involutional psychoses, by E. Davidoff. The presenile dementias, by G A. Jervis. Senile psychoses and psychoses with cerebral arteriosclerosis, by D Rothschild. The toxic delirious reactions of old age, by G. W Robinson, J Older mental patients after long hospitalization, by E. Hartmann The aged subnormal, by O. J Kaplan. Psychosomatic medicine and the older patient, by B. Mittelmann. Psychotherapy in the older individual, by F V Rockwell Mental hygiene in later maturity by N D C. Lewis. Orientation of the problems, by E. J Stieglitz. Index.

Note A collection of essays on various phases of the problem of mental disorders in later life, rather than an inclusive study As the editor states, the subject is relatively new and is only just emerging from the period when description of cases and entities is giving way to discussion and study of causes, prevention, and treatment Most of the authors discuss their special topics in relation to physical conditions, illnesses, and previous mental history Outstanding is the conclusion that definite neurotic or psychotic patterns are associated with definite age groups and sometimes physiologic conditions. In general, most of the authors feel that mental disorders in later life can be treated, and that probably many of them can with advancing knowledge be prevented Selected bibliographies appear at the end of each chapter.

KARPMAN BENJAMIN

The alcoholic woman, case studies in the psychodynamics of alcoholism. Sponsored by Washington Institute of Medicine Research Foundation. Washington D C. The Linacre Press, 1948 238 p. 22 cm. $3 75 1384

Contents: The case of Miss Elizabeth Chester The case of Mrs. Vera Rasched. The case of Mrs. Frances Elliott. General discussion. Epilogue. Index.

Note The greater part of this book consists of detailed presentations of the case histories of three alcoholic women who were under the author's care for psychoanalysis and psychotherapeutic treatment. The essential thesis of the book is that alcoholism is in many cases merely one manifestation of neurosis. The author holds the position of Chief Psychotherapist in St. Elizabeths Hospital, Washington, D. C.

KLAPMAN, JACOB W

Group psychotherapy theory and practice. New York Grune & Stratton 1946 344 p illus. 23 cm. $4.50 1385

Contents: Part I, Historical and anthropological considerations: Historical. Mental, social, and cultural origins. Part II, Dynamics: Group transferences and formations—dynamics of therapy Interrelationship of group and individual psychotherapy Re-education. Part III, Therapy: Methods of administration Affective re-education—psychodrama. Affective re-education in the outpatient clinic. Group psychotherapy with "problem children" and their mothers. Group psychotherapy in private psychiatric practice. Affective re-education in the mental hospital Methods of affective re-education. Orientative re-educational psychotherapy Ancillaries to group psychotherapy Bibliography Index.

Note. An attempt at a summation of current usages in group psychotherapy It also indicates some guiding, although admittedly tentative, principles for those who contemplate the use of group psychotherapy as a re-educational process—psychiatrists and physicians especially The therapy of a number of representative groups is depicted. The author draws upon experiences during and after World War II when group psychotherapy was suddenly because of the large numbers of military psychiatric casualties, recognized generally as an effective type of psychotherapy

LANDIS CARNEY, AND M MARJORIE BOLLES

Textbook of abnormal psychology New York The Macmillan Company 1946 576 p illus. 24 cm. $4 90 1386

Contents: Introduction. Description, classification, and terminology Orienting concepts Dementia praecox. Manic-depressive psychoses The neuroses. Hysteria and dissociated personality Traumatic neuroses. Epilepsy Mental deficiency Mental changes and disorders of old age. Involutional melancholia, related psychotic states, and paranoia. Alcoholism and alcoholic mental disease. General paresis. Abnormalities associated with certain organic changes of the brain. Psychopathology associated with physical disease and with childbirth. Psychopathic personality Heredity Cultural and sociological factors. Development. Disorders of sensation, perception, and action. Disorders of speech. Amnesia. Disordered emotion description. Disordered emotion experimental findings. Disorders of volition. Intellectual deterioration and disorganization. The role of the home in psychopathology The internal environment. Education. The law and mental abnormality Medical psychology Psychotherapy Mental hygiene. Glossary Index.

Note. An undergraduate college textbook that is designed not only for students specializing in psychology but also for students in such fields as education, sociology and theology It provides a comprehensive view of the subject. The various types of psychological deviations from the normal are described and explained. In explaining the causes of disorders, the authors have not followed the theories of any one school, but have stated what they believe are the most rational explanations. Many related subjects such as the legal status of mentally diseased or defective persons are discussed. The text is well supplemented by literature references. Because of its scope and clarity it is useful as a reference book for lay readers.

LAW STANLEY GUY

Therapy through interview New York McGraw Hill Book Company Inc. 1948 313 p. 21 cm. (McGraw Hill series in health science, Amos Christie, *consulting editor*) $4.50 1387

Contents (abridged) The personality of the doctor. Medicine versus psychiatry The therapeutic situation. Supplementary reading. Index.

Note This book is intended to aid the general practitioner in the technique of psychiatric interviewing for the treatment of border line neurotic patients encountered during his general practice work. While psychological and physiological background material is scattered throughout the text major emphasis is given to the technique of the interview The dialogue method of interview is stressed and the procedures used are illustrated by a series of composite case histories describing the typical features of common cases of psychoneuroses The author is on the staff of the Minneapolis Psychiatric Institute in Minneapolis.

LEVY, DAVID MORDECAI

New fields of psychiatry New York W W Norton & Company, Inc. 1947 171 p 21 cm. (The Thomas William Salmon Memorial Lectures) $2 75 1388

Contents Child guidance. Comparative psychiatry Delinquency-criminology Social work. Educational psychiatry Industrial psychiatry Military psychiatry Induction center Personnel selection. Political psychiatry A sample case study in political psychiatry References. Index.

Note The lectures on psychiatry published in this volume cover new fields which have gone beyond the doors of the psychopathic hospital. The period covered is 1920 to date, and the method used by the author is to tell of those phases of psychiatry in which he had personal experience beginning with the child-guidance movement and ending with the utilization of political psychiatry as an instrument of the American military government in Germany The lectures were given originally at the New York Academy of Medicine.

LEWIS NOLAN DON CARPENTIER, AND BERNARD L. PACELLA editors

Modern trends in child psychiatry Editorial assistant Gertrud M. Kurth. New York International Universities Press 1945 341 p illus 23 cm. $6 00 1389

Contents Anxiety in infants and its disorganizing effects, by Margaret A. Ribble. Maternal overprotection, by David M Levy Primary conduct disturbances. their diagnosis and treatment, by John H. W Van Ophuijsen Ego psychology applied to behavior problems, by Margaret S. Mahler Psychosomatic approach to childhood disorders, by Hilde Bruch. A new tool in psychotherapy with adolescents, by Caroline B Zachry Personality diagnosis in childhood, by Bruno Klopfer The electroencephalogram in behavior disorders, by Bernard L. Pacella. Male sex delinquency and community responsibilities, by Lewis J Doshay Psychoses in children, by Charles Bradley Organic brain conditions producing behavior disturbances; a clinical survey of encephalitis, burn encephalopathy and the traumatic states, by Lauretta Bender Fantasy and reality in the art expression of behavior problem children by Margaret Naumburg Play analysis in research and therapy by J Louise Despert. Combined psychotherapy with children and parents, by Frederick H Allen. Child analysis, by Margaret S Mahler Group therapy with children, by S R. Slavson. Psychiatric social case work with children, by Leona M. Hambrecht.

Note A collection of lectures on child psychiatry and child guidance that were given at the New York State Psychiatric Institute and Hospital in 1943 and 1944 The purpose of the collection is to make available a summary by leading authorities of recent thought, investigations, and achievements in child psychiatry Most of the articles are accompanied by bibliographical references

LORAND SANDOR

Technique of psychoanalytic therapy New York International Universities Press Inc., 1946 251 p 22 cm $4 50 1390

Contents Introduction Interpretation Anxieties and phobias. Sexual difficulties in the male. Sexual difficulties in the female Compulsion neuroses. Character neuroses. Neurotic depression. Dream analysis. Problems of counter transference Termination Bibliography Index

Note Based upon an advanced seminar in the technique of psychoanalysis given at the New York Psychoanalytic Institute over a period of years, this book discusses technical procedures and special technical problems of psychoanalytic therapy The author who acknowledges his indebtedness to Freud and his associates, draws upon his own experiences as a clinical analyst to illustrate the methods of technique. The bibliography is 12 pages in length.

LOWREY LAWSON GENTRY

Psychiatry for social workers. New York Columbia University Press 1946 337 p. 22 cm $3 50 1391

Contents Introduction. The data of psychiatry Specific etiological factors. Clinical combinations of symptoms. Psychoses of organic origin. Psychoses of toxic origin. Psychoses without specific pathology or etiology Cyclothymic (manic depressive) psychoses. Schizophrenia (dementia praecox) Paranoia and paranoid conditions. The convulsive disorders. Mental deficiency Neuroses (psychoneuroses) Psychopathic personality The behavior disorders Behavior disorders due to internal pathology Reactive behavior disorders. Problems of rejectees and veterans. Selected reading list. Index.

Note A concise, expertly-written summary of psychiatry and abnormal psychology Its distinguishing feature is that it is written from the viewpoint of professional social workers. It describes the major psychological disorders and summarizes what is known about their causation, pathology prognosis, and treatment. Psychoanalytic concepts and techniques are not discussed in detail, instead the book presents the clinical knowledge that will be useful to the social worker in her contacts with disordered personalities.

MASSERMAN, JULES HYMEN

Principles of dynamic psychiatry including an integrative approach to abnormal and clinical psychology With a glossary of psychiatric terms Philadelphia W B Saunders Company 1946 322 p illus 24 cm. $5 00 1392

Contents (abridged) Development of behavior theory Psychologic concepts of behavior Psychoanalytic concepts of behavior The dynamics of adaptation. Neurotigenic dynamisms. Psychotic dynamisms. Biodynamics of normal and abnormal behavior Biodynamic correlates of current theories of behavior Biodynamic formulations of behavior The principle of substitution. Principle of conflict. Intensity of conflict and modes of therapy Biodynamic processes of fixation and of "verbal" therapy A critique of the biodynamic theory of behavior Appendices Illustrative psychoanalysis of a neurotic personality Psychoanalytic formulations of the psychoses. Some principles of group communication. Bibliography Glossary Index.

Note This work is based on material developed by the author and his colleagues in teaching psychiatry at the Northwestern University School of Medicine It is designed for use as a textbook in introductory courses in medical school, and in other courses offered to students who are preparing for professional work in the field The author has emphasized the delineation of the motives of behavior and of the interrelationships of these motives of the living organism. The exposition incorporates excerpts from numerous case histories, and the explanatory material is directly related to clinical application. The bibliography of twelve hundred titles is exceptionally long for an introductory work. The glossary although limited to specialized terms, contains more than one thousand definitions.

MENNINGER, WILLIAM CLAIRE

Psychiatry in a troubled world yesterday's war and today's challenge. New York The Macmillan Company 1948 636 p 24 cm. $6 00 1393

Content (abridged) Part I, In war Background—psychiatry prior to World War II—The initial handicaps confronting army psychiatry in World War II. The soldier—the personality of the soldier—the environment of the soldier—women in the army Clinical observations—psychoneurotic disorders—reactions to combat—the psyche and the soma—behavior disorders—malingering—homosexuality Administration and practice of army psychiatry—the people who did the job—choosing the soldier—the treatment of psychiatric patients—the evacuation of psychiatric patients—preventive psychiatry—psychiatry in World War I and World War II. Part II, In peace Social reintegration of the veteran. Mental health in the home. Implications for the community Lessons for civilian psychiatry Contributions of psychiatry to public health. Mental hygiene in industry and business. Psychiatry in criminology and penology Needed changes in the army Appendix Nomenclature. The characteristics and attitudes of the soldier in World War II. Reference data. Index.

Note In the first part of this book the author describes and interprets the experience of psychiatrists during World War II. He

signed primarily at placing this experience at the disposal of other professional men in the event of another war" but because of the tremendous popular interest in psychiatry he has presented it in style which is intelligible to the advanced general reader The second section of the work is concerned with problems of civilian life, and it reflects to large degree experiences recorded in the first section as they suggest solutions of problems of everyday life There is large amount of material included—relatively much more than is found in most books in the field. Individual case histories and studies are included, but the emphasis is on the group.

MEYER, ADOLF
The commonsense psychiatry of Dr Adolf Meyer fifty two selected papers edited with biographical narrative, by Alfred Lief New York McGraw Hill Book Company Inc., 1948 677 p illus. 24 cm. (McGraw Hill series in health science, Amos Christie, consulting editor) $6.50 1394

Contents (abridged) Introduction The contributions of psychiatry to the understanding of life problems. Preparation in Europe. The American setting. Action in Kankakee. Action in Worcester. Action in New York. Dynamic psychology established. Reaching to the public. Action in Baltimore. Training the doctors. Social aspects. A science of man. Reference notes. Glossary of medical and philosophical terms Index

Note: A representative collection of the published work of psychiatrist who contributed greatly to the improvement of psychiatric training and the treatment of mental patients in the United States of America. Dr. Meyer's own writings are interspersed with appropriate biographical narrative, supplied by the editor. The papers range from interpretations on purely psychiatric problems, through such topics as eugenics, teaching, medical-legal problems, and the role of psychology in relation to science. The author's pragmatic approach to the human being as psycho-biological whole is the dominant theme. The book is of interest not only to persons in this medical specialty but also to general readers who are interested in psychiatry The glossary is intended to aid the latter group.

MODERN ATTITUDES IN PSYCHIATRY The march of medicine, 1945 New York Columbia University Press 1946 154 p. 21 cm. (The New York Academy of Medicine. Lectures to the laity Number x) $2.00 1395

Contents Foreword, by Cornelius P Rhoads. Introduction, by Edwin G. Zabriskie Psychiatry in the history of medicine (The Linsly R. Williams memorial lecture) by Iago Galdston. The development of modern psychiatry by James H. Wall. The patient as person the social aspects of illness, by G Canby Robinson. Present trends in psychiatry and the future outlook, by Franz Alexander. Psychiatry and the war by William C Menninger. Psychotherapy in everyday practice (The George E. Sohlenberg memorial lecture) by Edward Weiss Index.

Note A series of lectures planned to present survey of the status of psychiatry and psychotherapy at the close of World War II. They are addressed primarily to persons outside the medical profession and therefore are free of technical terminology

MORGAN, JOHN JACOB BROOKE, AND GEORGE D LOVELL
The psychology of abnormal people. New York Longmans, Green and Co., 1948 673 p illus. 21 cm. $4.50 1396

Contents How to understand unusual persons. The process of adjustment. Personality deviation. Disorders of intelligence. Disorders of sensation Disorders of perception. Disorders of association Memory disorders. Delusions. Motor disorders. Emotional disorders. Sleep, dreams, and hypnosis. Abnormalities associated with physical, organic, and toxic disorders. Psychoneuroses. Functional psychoses Schizophrenia—Manic-depressive psychoses and paranoia. Psychopathic personality and sexual aberrations. Psychotherapy and treatment Appendices: Classification of mental disorders—Glossary Subject index. Index of names.

Note. (1973) A well-written elementary treatise. It is used primarily as college textbook but is suitable also for educated laymen. It is designed more to give an informative, well-rounded picture of the origin, nature, treatment, and prevention of mental abnormalities than to prepare students for professional work in abnormal psychology; therefore psychological aspects rather than psychiatric are stressed. In this edition the work has been substantially revised, in part by the senior author but largely by the junior author after the death of the former Practically every chapter is new or has been rewritten, and the majority of references in the chapter bibliographies are to literature published in the last decade.

MUENCH, GEORGE A
An evaluation of non-directive psychotherapy by means of Rorschach and other indices with a foreword by Carl R. Rogers Stanford University Calif Published for the American Psychological Association by Stanford University Press, 1947 163 p 23 cm. (Applied psychology monographs H. S Conrad editor No 13) Paper $2.00 1397

Contents: Foreword, by Carl R. Rogers. Purpose of the study Problem and procedure. The relation of test results to the outcome of twelve cases of psychotherapy Discussion of group changes in test results. Summary and conclusions. Bibliography

Note: An attempt at measuring the results of applied psychotherapy The reactions of socially maladjusted patients to the Rorschach, Kent-Rosanoff, and Bell adjustment inventory tests before and after therapy are listed and evaluated. A large part of the monograph is occupied with the statements made by patients during periods of clinical treatment. The majority of cases reported are concerned with emotional disturbances in the young and unmarried.

MUNCIE WENDELL
Psychobiology and psychiatry a textbook of normal and abnormal human behavior Second edition. With 70 illustrations. St. Louis The C. V Mosby Company 1948 620 p illus. 25 cm. $9 00 1398

Contents (abridged) Part I, Psychobiology—the study of normal behavior Historical and philosophical bases of psychobiology Student's personality study Part II, Abnormal behavior—pathology and psychiatry Examination methods and immediate findings. The static constitutional types. Plastic psychodynamic minor reactions. Major reactions—holergasias. Affective reactions. Toxic delirious states and para-reactions. The support disorders—dysergasia. The acquired organic deficit reactions—anergasia. The convulsive state and allied conditions—the epilepsies. Part III, Treatment Important therapeutic aids. Treatment of the static constitutional reactions. Treatment of the psychodynamic minor reactions—psychoneuroses. Treatment of the major reactions—holergasias. Treatment of convulsive disorders—the epilepsies. Mental hygiene. Index.

Note (1770a) The author's purpose in the first edition (1939) was to incorporate in textbook the concepts and working methods of the Henry Phipps Psychiatric Clinic of the Johns Hopkins Hospital with which he has long been associated. In the intervening years he had devoted considerable time to private practice, in the light of which experience he has revised some of the material for the present edition. While the bulk of the book remains unchanged, certain sections in Part 2 have been rearranged and rewritten, and Part 3 has been expanded to include recent developments such as group therapy criteria for hospitalization, barbiturate toxicity and shock treatments. Numerous case histories from the author's practice are included. There are chapter references, but the analysis of the literature on the subject appearing in the historical psychiatry appendices of the first edition has been omitted and the book thereby shortened by about 100 pages.

NIELSEN JOHANNES MAAGAARD AND GEORGE N THOMPSON
The engrammes of psychiatry Springfield, Ill. Charles C Thomas, 1947 509 p illus. 23 cm. $6 75 1399

Contents (abridged) Cognition. Consciousness—awareness—attention. The instincts. The emotions. The will. Personality Perception—recognition—recall (hallucinations, illusions, delusions) Intelligence, judgment, wisdom. Cerebral function with reduced awareness. Some defense mechanisms of the mind. Psychoneuroses. Addiction and intoxication. Psychopathic personality Schizophrenia. Manic-depressive psychoses (cyclothymic reaction types) Involu-

tional disorders (psychoses) Paranoia. Syphilitic psychoses. Mental symptoms due to general somatic diseases. Congenital mental disturbances. Geriatrologic psychiatry Psychosomatic medicine. Treatment in psychiatry Technique of psychiatric examination. References Index.

Note. Directed primarily toward psychiatrists, anatomists, and physiologists, this work is study of the physiological aspects of abnormal behavior The authors are unwilling to accept much of the superstructure of current psychiatric theory because it is to them not demonstrable by scientific observation or proof; accordingly the thesis of the book is insistence upon the anatomy and physiology of the brain as the source of behavior. The first ten chapters explain the correlation of specific brain areas and functions with the major psychological activities, and in the second half of the book the results of abnormal brain physiology are traced in the common psychiatric disturbances, illustrated by numerous case histories. The authors' wide experience and thorough study are evident in treatment and presentation, and there is substantial list of references in the appendix.

NOYES ARTHUR PERCY

Modern clinical psychiatry Third edition. Philadelphia W B Saunders Company 1948 525 p 24 cm. $6.00 1400

Contents (abridged) Mind, its development and purpose. Psychic energy and the dynamics of behavior Mental mechanisms and motives. The causes and nature of mental disease. Symptoms of mental disease. Examination of the patient. Psychoses with syphilitic meningo-encephalitis. Psychoses with syphilis of central nervous system Psychoses with epidemic encephalitis. Psychoses with other infectious diseases. Alcoholic psychoses. Traumatic mental disorders. Psychoses with cerebral arteriosclerosis. Psychoses with other disturbances of circulation. Psychoses with convulsive disorders (epilepsy) Senile psychoses Involutional psychoses Psychoses due to metabolic and endocrine diseases Psychoses with brain tumor Psychoses with organic changes of nervous system. Psychoneuroses. Manic-depressive psychoses. Schizophrenia (dementia praecox) Paranoia and paranoid conditions. Psychopathic personality Psychiatry and general medicine. Shock and other physical therapies Psychotherapy Child psychiatry Index.

Note (1977) Primarily intended for the general practitioner this book is concerned with both the diagnosis and treatment of both major and minor psychiatric diseases, emphasis being on the problems most likely to arise in general practice The anatomic, physiologic, chemical, and psychological factors in mental disease are explained and much stress is placed on the underlying causes In the present edition the last three chapters are entirely new and there is considerable revision in the remainder of the text. Bibliographies list references to recent publications.

OVERHOLSER WINFRED AND WINIFRED V RICHMOND

Handbook of psychiatry Philadelphia J B Lippincott Company 1947 252 p 24 cm. $4 00 1401

Contents What this book is about The causes of mental disorders. The mental hospital and modern methods of treatment Mental defect and the problems that grow out of it. Psychoses associated with organic conditions. Alcohol and its role in the psychoses. Psychoses associated with drugs and other toxic agents. Psychoses f middle life and old age The functional psychoses—the manic-depressive psychoses—dementia praecox schizophrenia The paranoias. The psychoneuroses The psychopathic personality Mental aberrations and war Crime and mental disorder Psychiatric conditions in children Psychiatry and the layman Index.

Note This work not reference manual, as the title might imply but clearly-written description of the scope of psychiatry and of the mental disorders with which psychiatry deals. It is addressed to laymen and to such groups as nurses and social workers, but the subject is not "written down The discussions have professional tone and fair amount of technical terminology is introduced Good lists of additional reading are appended to the chapters for the benefit of those readers ho wish to pursue specific topic further

PENNINGTON LEON ALFRED AND IRWIN A. BERG editors

An introduction to clinical psychology with a foreword by George D Stoddard New York The Ronald Press Company 1948 595 p illus 24 cm $5 00 1402

Contents: Part I, Introduction The meaning of clinical psychology by R. B. Cattell. What is normal behavior? by O. H. Mowrer Part II, Clinical problems Signs of personality deterioration, by D W Dysinger Behavior problems of children, by G. L. Anderson and H. H. Anderson. The mental defective, by M. Sherman. The physically handicapped, by S. S. Marzolf. The educationally backward, by R. M. Bear Speech and personality by F H. Sanford. Tension states, by A. C. Washburne Psychosexual behavior by J Bell. Psychological trends and problems in later maturity by R. G. Kuhlen. Antisocial personalities, by H. Cleckley The psychoses and the psychoneuroses, by R. M. Dorcus. Part III, Clinical methods: The measurement of achievement and aptitude by J. E. Horrocks. Intelligence testing and clinical practice, by A. Magaret. Interest and personality tests, by W T Donahue. Projective methods, by H. Sargent. Part IV Psychotherapy Directive techniques, by F McKinney Client-centered therapy by W U Snyder The semantics of maladjustment, by W Johnson. Recent advances in the treatment of mental disease, by G. K. Yacorzynski. Part Professional relationships: Psychiatry and clinical psychology by D G. Wright. Author index. Index of cases. Subject index.

Note In the words of the editors "The purpose of this book is to describe eclectically at the introductory level hat clinical psychologists do. However the papers vary somewhat in level. Many of them are descriptive and relatively elementary but others are written on relatively advanced level. All are intended for college students and other readers ho have had some formal education in basic psychological principles and techniques. Many of the papers include excerpts from case histories, and all are supplemented by rather extensive reference lists.

PROGRESS IN NEUROLOGY AND PSYCHIATRY

Progress in neurology and psychiatry an annual review Volume II. Edited by E. A. Spiegel. New York Grune & Stratton 1947 541 p 23 cm. $8 00 1403

Content Basic sciences Neuro-anatomy by A. T Rasmussen. General neurophysiology by E. A. Spiegel and M. Marks. Regional physiology of the central nervous system, by P F A. Hoefer Neuropathology by G. B Hassin. Pharmacology of the nervous system, by J E. P Toman and L. S. Goodman. Neurology: Clinical neurology by J C. Yaskin and C. Rupp Otoneurology by J. R. Lindsay and H. B. Perlman. Neurology of the optic and oculomotor systems, by M. B Bender Neurosyphilis, by S. F Olpin, J Epilepsy by C. Brenner and H. H. Merritt. The autonomic nervous system, by A. Kuntz. Endocrinology by A. Grollman. Cerebrospinal fluid, by M. Spiegel-Adolf. Radiology of the skull and central nervous system, by B. R. Young. Electro-encephalography by J Hughes. Neurosurgery: Peripheral nerve injuries, diagnosis and treatment, by L. M. Tarlov Surgery of the spinal cord, by M. Scott. Cerebral trauma, by H. T Wycis. Surgical infections of the brain and its coverings, by C. Pilcher and W F Meacham. Brain tumors, by L M. Davidoff and D Oucherwitz. Surgical treatment of motor and sensory disturbances, by A. E. Walker and T L. Hopple. Psychiatry General clinical psychiatry by M. H. Greenhill Mental hygiene, by F G. Ebaugh and C. Rymberg. Forensic psychiatry by W Overholser Child psychiatry by L. Hinds and L. Bender Neuroses, by J P Spiegel. Psychosomatic medicine, by E. Weiss and L. J Saul Alcoholism, by E. B. Allen and C. T Prout. The Rorschach test and other projective technics, by F Halpern Shock therapy by P H. Wilcox. Psychosurgery by W Freeman and J W Watts. Group psychotherapy by S. R. Slavson and S. Scheidlinger Psychiatric nursing and occupational therapy by A E. Bennett and B Engle Psychoanalysis, by F Alexander and G J Piers Rehabilitation of veterans, by L. B. Hohman Index.

Note An annual publication in which the year's progress as it has been reported in the published literature is reviewed. Each chapter is essentially digest of literature and is accompanied by list of references hich are key-numbered to statements in the text The present issue covers the period December 1945 through November 1946. Volume III was published in 1948 and priced at $10.00

PSYCHIATRIC RESEARCH papers read at the dedication of the laboratory for biochemical research, McLean Hospital Waverley, Massachusetts May 17 1946 Cambridge, Mass. Harvard University Press, 1947 113 p. illus. 22 cm. (Harvard University monographs in medicine and public health. Number 9) $2.00 1404

Contents: Research at the McLean Hospital, by C. K. Drinker Biochemical problems related to psychiatry by J. Folch. Integration of medical and psychiatric problems: report of progress, by S. Cobb. Protocol for review of psychiatry by H. S. Gasser Psychiatrical sciences, by W. Penfield. The psychobiology of psychiatric research, by E. A. Strecker

Note These papers are addressed chiefly to psychiatrists, directors of mental hospitals, and professional men in related fields such as neurosurgery

RENNIE, THOMAS ALEXANDER CUMMING AND LUTHER E WOODWARD

Mental health in modern society New York The Commonwealth Fund, 1948 424 p. illus. 24 cm. $4 00 1405

Contents: Part 1, Lessons from the war period. Mental health services in the armed forces. Emergency measures for aiding veteran-civilian adjustment. The psychiatric disabilities of war—dynamics and motivation—principles, methods, and results of treatment. Part II, Post-emergency problems in mental health Continuing mental health problems and needs. Part III, Sources of help in treatment and prevention Contributions of the practicing physician. Contributions of social workers. Contributions of the psychologist. Pastoral counseling and church life. Mental hygiene in industry Practical considerations in interviewing and counseling. The mental hygiene of family living. Mental health in education. Summary and prospect—the individual and society Appendices. Index.

Note: During World War II great advances were made in knowledge of the causes and methods of treatment of mental illness. The present volume aims to show how this newly acquired knowledge can be applied in solving problems of mental health at the community level. The responsibilities of both individuals and agencies in psychiatric rehabilitation work are discussed. The authors are associated with the National Committee for Mental Hygiene.

RUSSELL WILLIAM LOGIE

The New York Hospital a history of the psychiatric service 1771–1936 New York Columbia University Press 1945 556 p illus 24 cm. $7 50 1406

Contents (abridged) Part One, Introduction—the close of the eighteenth century: Psychiatric thought Psychiatric practice Part Two, The first hospital in New York and its department of psychiatry 1771–1821. Part Three, The founding of Bloomingdale Asylum, 1815–1840 Thomas Eddy and new system of treatment. The first twenty years, 1821–1840 "Moral treatment" without medical direction. Towards medical direction. Part Four A transition period, 1840–1852 Part Five, Planning for classification and removal—state supervision and laws, 1852–1877 Part Six, A medically directed private charity 1877–1894 Part Seven, The dawn of modern scientific psychiatry at Bloomingdale, 1894–1911. Part Eight, Fulfillment of some long-cherished aspirations, 1911 1926. Part Nine, A complete organization for service, education, and research, 1926–1936 Advancement of medical and educational resources. The Payne Whitney Psychiatric Clinic of the New York Hospital. Appendices. Index.

Note This is book of considerable narrative as well as medical interest, for in presenting the history of psychiatric treatment in the New York Hospital the author is in reality outlining the whole story of organized care for the mentally ill in America. Access to abundant early records of the institution and sympathetic understanding of the problems of psychiatric practice enable the author to present his story fully and with authority The real value of the book, however lies in the account rendered of society's changing attitude toward mental illness and the tremendous strides in the techniques and treatments employed by medical science. The work of number of individual doctors is stressed, particularly in the early days, and the book should be of interest and value to medical historians, sociologists and, especially to psychiatrists. There are full bibliographical footnotes and numerous photographs.

SADLER WILLIAM SAMUEL

Modern psychiatry St. Louis The C. V Mosby Company 1945 896 p 25 cm. $10 00 1407

Contents (abridged) Introduction: Psychosomatic medicine. Part I, Personality problems. Classifications of personality Maladjustment of personality Personality mechanisms. The preschool child The school child. The adolescent personality The adult personality Family life. The psychopathic personality Part II, The psychoneuroses Psychasthenia and neurasthenia. Compulsions—obsessions. The inferiority complex. Mood swings—mild depressions. Anxiety states. Sexual problems. Hypochondria. Hysteria. War neuroses. Part III, The psychoses: Emotional reaction types. Involution melancholia. Schizophrenic reaction types. Paranoid reaction types. Toxic reaction types. Organic reaction types. General treatment of the psychoses. Shock and convulsive therapy Part IV General psychotherapeutics: The general management of mental and nervous disorders. Suggestion and hypnotism. Psychiatry and psychiatrists. Sublimation and fear management. Habit and self-control. Play and recreation Rest and relaxation. Philosophy and religion. Occupational therapy Therapeutic reading and study Appendix. Schools of psychiatry Bibliography Glossary Index.

Note An extensive study of the problems of personality disturbances ranging from nervous disorders to mental diseases, and of the current working practice of psychosomatic medicine. It is intended for the general practitioner and psychiatrist as reference book for diagnosis and treatment. It is, however of more than clinical interest. Because of the author's lucid and simple style as well as his idealistic point of view this discussion of the difficulties that human beings have in adjusting themselves to life has value also for the layman.

SHERMAN MANDEL

Intelligence and its deviations. New York The Ronald Press Company 1945 286 p illus 22 cm. (Psychology series A T Poffenberger editor) $3 75 1408

Contents: A definition of intelligence. Mental growth. Intelligence and physical development. Environment and intelligence. Intelligence and delinquency Intelligence and psychoses. Classification of mental deficiency Mental deficiency and specific brain pathology Epilepsy Mongolism. Cretinism. Mental testing. The adjustment of the defective. Some genetic problems. Intellectual superiority Bibliography Glossary Index.

Note: A largely descriptive treatment of intellect, the intellectual process, and intellectual deficiencies. The work is based on theoretical, experimental, and clinical investigations, and it includes medical aspects of the subject as well as the more usual psychological and sociological discussions. The author intends the book to be used as text in university departments of psychology and medicine, and as reference for practicing psychologists and psychiatrists.

STRECKER EDWARD ADAM

Fundamentals of psychiatry Fourth edition. 21 illustrations. Philadelphia J B Lippincott Company 1947 325 p illus. 20 cm. $4.00 1409

Contents: The importance and the opportunities of psychiatry Etiology Classification of mental diseases Further thoughts about nomenclature and classification. Methods of examination and symptoms Organic psychoses. Toxic psychoses. Functional psychoses and psychoneuroses Psychosomatic medicine and psychiatry Defect reaction types. Psychiatry and war The war and the psychiatric patient. Glossary Index

Note (1947) A concise manual of information on the concepts of psychiatry which the author believes are essential to general practitioners in their regular practice. By writing in terse style and by addressing himself to persons already educated in medicine, the author has succeeded in covering much ground in small space. Wartime experience in psychiatry is reflected in the revision of the work in this edition. There is new discussion of classifications. The material on examination has been extensively rewritten and enlarged. The chapter on psychosomatic medicine also is new edition. Other changes include fuller discussions of neuroses and an amplified glossary

STRECKER, EDWARD ADAM AND OTHERS

Practical clinical psychiatry by Edward A Strecker Franklin G Ebaugh, and Jack R. Ewalt. Psychopathologic problems of childhood, by Leo Kanner Sixth edition. Philadelphia The Blakiston Company 1947 476 p. illus. 23 cm. $5.00 1410

Contents Preface to sixth edition. Personality development and function Methods of psychiatric examination. The organic reaction

types. Toxic psychoses. The affective reaction types. The schizophrenic reaction types. Constitutional psychopathic inferior Reactions of developmental and constitutional defects. Paranoid reaction types and paranoia. Traumatic reactions. Psychoneuroses. Psychosomatic medicine. Pathologic drinking. Psychopathologic problems of childhood. Index.

Note. (1944) A standard, widely used medical college textbook. It presents broad and fairly detailed view of the subject in relatively small space. Case histories are used freely in the presentation and the areas of contact among psychiatry internal medicine and other specialties are indicated. The present edition has been extensively rewritten and revised, partly to include advances made in the field of clinical psychiatry during World War II. The nomenclature of military psychiatry has now been incorporated into the text along with the standard nomenclature. The bibliographies have been brought down through about 1944.

THORNE, FREDERICK CHARLES AND OTHERS

Current trends in clinical psychology Consulting editor S Stansfeld Sargent. New York New York Academy of Sciences, 1948 62 p. 23 cm. (New York Academy of Sciences. Annals. Vol. 49 p 867–928 1948) Paper $1.50 1411

Contents Theoretical foundations of directive psychotherapy by F C. Thorne. Some dynamic aspects of non-directive therapy by A. W Combs The theory and practice of group psychotherapy by H. E. Durkin. Psychodrama and group psychotherapy, by J L. Moreno. Discussion on group therapy What did the clinical psychologist learn from the War? by M. L. Hutt. Future training in clinical psychology by J C. Miller

Note A collection of papers wherein are discussed various principles, methods, and techniques of clinical psychology which have developed in recent years. In each case the treatment is brief and illustrated with typical examples taken from the author's experience. The papers were prepared by professional psychologists, and were originally presented at conference held in January 1947 under the auspices of the New York Academy of Sciences.

THORNER, MELVIN W

Psychiatry in general practice. Philadelphia W B Saunders Company 1948 659 p. 24 cm $8.00 1412

Contents (abridged) Section one, Introduction. Section two, The people: Intelligent people Dull people People and sex. Unhappy people. Confused people. Dreamy people. Anxious people. Suspicious people. Older people. The children Section three The methods The aim of psychiatric examination. The physical examination and special methods. *The patient speaks* Chemotherapy and physiotherapy Shock and related therapy Psychotherapy Section four Appendices Classification of mental disorders. Commitment procedures. Index

Note A simplified but rather comprehensive exposition of psychiatric principles and techniques. It is designed mainly for general practitioners of medicine who have received no formal training in psychiatry but who *need some knowledge* of the subject in the course of their regular practice. In general the author' method of presentation is to present summarized case history then to discuss the type of psychological difficulty illustrated by it and the indicated corrective therapy Selected references for further reading are included. The appendix on commitment procedures applies of course to the states of the U S. A.

THORPE LOUIS PETER, AND BARNEY KATZ

The psychology of abnormal behavior a dynamic approach. New York The Ronald Press Company 1948 877 p illus. 24 cm. $6 00 1413

Contents (abridged) Part I, Background of abnormal behavior Historical introduction to the study of abnormal behavior. Part II, The nature and origin of abnormal behavior The dynamics of abnormal behavior Etiological factors—psychological. Etiological factors—organic Part III, Symptoms of abnormal behavior Emotional abnormalities. Abnormalities of cognitive processes. Motor abnormalities. Abnormalities and conditions of sleep Classification of abnormal behavior Part IV Borderlands of abnormality Simple personality maladjustments. Maladjustment and criminal behavior Intellectual deficiencies. Sexual aberrations. Psychosomatic maladjustments. Part The psychoneuroses Part VI, The psychoses and associated personality disorders: A, Organic psychoses Part VII, The psychoses and associated personality disorders, B, Functional psychoses. Part VIII, Principles and techniques of therapy: The objectives of psychotherapy Methods f examination and diagnosis Psychoanalysis and psychoanalytic methods. Psychotherapeutic methods. Psychiatric therapeutic methods. Appendices. Institutions and institutional procedures. Statistics on patients with psychiatric disorders Glossary of technical terms. Case index. Author index. Subject index.

Note: A college textbook. Because it was written recently the authors have been able to incorporate material from military experience during World War II, and to use data presented in other recent publications such as the Kinsey report. For each of the major types of mental disorder there are included discussions of incidence, symptoms, etiology treatment, prognosis, and prevention and these discussions are unexpectedly full for an introductory work. Careful attention has been paid to the definitions of terms. The bibliographical material consists of numerous footnotes and lists of recommended readings. The authors are members of the faculty of the University of Southern California.

WHITE, ROBERT WINTHROP

The abnormal personality a textbook. New York The Ronald Press Company 1948 613 p 24 cm $5 00 1414

Contents (abridged) Historical introduction—origins of abnormal psychology Clinical introduction—examples of disordered personalities. The integration of personality Fantasy dreams, and hypnotic behavior Anxiety and defense. Neurotic conflict and its effect on personality The symptom syndromes of neurosis. Psychotherapy—basic methods and principles, technical aids and variations. Psychosomatic disorders. Effects of injuries and abnormal conditions in the brain. The psychoses—some common symptom syndromes. schizophrenia. The problem for society Name index. Subject index.

Note. A college textbook for use in introductory courses in abnormal psychology The author has made special effort to make the subject interesting, and one of his techniques is to integrate the case histories with the exposition instead of setting them off separately as is usually done. The exposition is clear and the discussions of specific topics are relatively full. The book is particularly suitable for use in survey or cultural types of courses The author is Lecturer on Clinical Psychology at Harvard University and Director f its Psychological Clinic.

WITMER HELEN LELAND, editor

Psychiatric interviews with children. New York The Commonwealth Fund, 1946 443 p. illus. 26 cm. $4.50 1415

Note The ten case records reproduced in this book were selected as representative of the principles by which recognized therapists have effectively dealt with difficulties that are typically present in child guidance work. They show in detail what went on between therapist and patient and are preceded by the individual therapist's own analyses of the main factors operative in the cases and the methods and objectives of treatment. In addition to the therapists' comments, Dr Witmer gives description of the general content of psychotherapy in child guidance clinics and shows how the principles have been applied in these cases. The contributing therapists were Frederick H. Allen, Phyllis Blanchard, Lydia M. O Dawes, Hyman S. Lippman Martha W MacDonald, H. B. Moyle, Beata Rank, and Robert A. Young.

WITMER, HELEN LELAND editor

Teaching psychotherapeutic medicine an experimental course for general physicians, given by Walter Bauer Douglas D Bond Henry W Brosin Donald W Hastings M. Ralph Kaufman John M Murray Thomas A. C. Rennie John Romano and Harold G Wolff Introductory chapter by Geddes Smith. New York The Commonwealth Fund 1947 484 p 24 cm. $3 75 1416

Contents Introductory: the course, by Geddes Smith. General orientation, by Thomas A. C. Rennie and Walter Bauer. Clinical problems. The patient-physician relationship, by M. Ralph

Kaufman. Normal personality development, by John M. Murray Clinical problems, II Psychotherapy by John Romano. The meaning of psychoneurosis, by M. Ralph Kaufman. Clinical problems, III. Diagnosis of psychoneurosis, by John Romano. Summary of the first week, by Thomas A. C. Rennie. Anxiety by John Romano. Clinical problems, IV General principles of psychotherapy by John W Murray and Henry W Brosin. Special therapies, by Donald W Hastings. Common psychopathology by Henry W Brosin. Common psychopathology by Douglas D. Bond. Clinical problems, Care of veterans, by Donald W Hastings. Life situation, emotions, and disease, by Harold G. Wolff. Case presentation, Case presentation, Case presentation, III. List of suggested readings. Index.

Note. An edited account, derived from stenographic recordings, of the lectures and discussions which took place during the experimental two-weeks course in psychotherapeutic medicine given at the University of Minnesota in April, 1946. The course was organized to familiarize general medical practitioners with this branch of contemporary medicine, and the present volume is intended not as textbook in the subject but simply as the record of an experiment in postgraduate medical education.

WOLBERG LEWIS ROBERT

Hypnoanalysis foreword by A. Kardiner New York Grune & Stratton 1945 342 p. 22 cm. $4.50 1417

Contents. Part One, The hypnoanalysis of Johan R. (I-XIV) Part Two, The theory and practice of hypnoanalysis: Psychoanalysis and hypnosis. Hypnoanalytic procedures. The recall of buried memories. Hypnosis and the transference. Hypnosis and resistance Hypnosis and interpretation. Index.

Note: An introduction to the methods and techniques of using the hypnotic state in psychoanalysis and as form of therapeutic treatment. The first part of the book is detailed case history with discussions by the author of the treatment of the patient over period of months. The second part is devoted to an exposition of the principles and techniques of hypnoanalysis. The author is lecturer at the New York Medical College.

WOLBERG, LEWIS ROBERT

Medical hypnosis. New York Grune & Stratton 1948 2 v 22 cm. Volume I $5 50 Volume II $6.50 1418

Contents (abridged) Volume I, The principles of hypnotherapy Part I, Historical phenomenologic and theoretic aspects of hypnosis. Part II, The technic of hypnosis: Introduction to hypnotic technic. The first hypnotic session. The second hypnotic session. Subsequent hypnotic sessions. Self hypnosis and group hypnosis. Part III, Applications of hypnotherapy The principles of psychotherapy Hypnosis in anxiety neurosis. Hypnosis in compulsion neurosis. Hypnosis in traumatic neuroses. Hypnosis in psychosomatic conditions. Hypnosis in character disorders. Hypnosis in alcoholism. Hypnosis in miscellaneous conditions. Dangers, limitations and failures of hypnosis. Index. Volume II, The practice of hypnotherapy Part I, Hypnosis in symptom removal: Technics in symptom removal. Limitations of symptom removal, Illustrative case. Part II, Hypnosis in psychobiologic therapy: Technics of hypnosis in psychobiologic therapy Hypnosis in guidance. Hypnosis in persuasion. Hypnosis in re-education. Hypnosis in reconditioning Illustrative case. Part III, Hypnosis in psychoanalytic therapy Hypnoanalytic procedures. Re-education through psychoanalytic insight. Illustrative case. The future of hypnosis. Index.

Note: An authoritative presentation of the nature, techniques, and application of hypnosis in psychotherapy The exposition is exceptionally detailed. In the first volume, induction techniques are described minutely and are illustrated with excerpts from actual cases. The greater part of the second volume consists of full transcripts, including all of the conversations between doctor and patient, of three case histories. The work is addressed mainly to graduate physicians, particularly psychiatrists. The author is Assistant Clinical Professor of Psychiatry at New York Medical College.

types. Toxic psychosis. The affective reaction types. The schizophrenic reaction types. Constitutional psychopathic inferior. Reactions of developmental and constitutional defects. Paranoid reaction types and paranoia. Traumatic reactions. Psychoneuroses. Psychosomatic medicine. Pathologic drinking. Psychopathologic problems of childhood. Index.

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THORPE, LOUIS PETER, AND BARNEY KATZ

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Contents: Introductory: the course, by Geddes Smith. General orientation by Thomas A. C. Rennie and Walter Bauer. Clinical problems, The patient-physician relationship, by M. Ralph

PSYCHOLOGY

GENERAL

BERNHARDT, KARL SCHOFIELD

Practical psychology New York McGraw Hill Book Company Inc. 1945 319 p illus. 21 cm. $2.50 1435

Contents: Part 1, Introduction An introduction to the study of psychology Efficiency in reading and study Part II, The origin and control of human activity: Development and adjustment. Human motivation. Mechanisms of adjustment to frustration. Influencing other people. The regulation of child behavior Feelings and emotions. Emotional control. Part III, Individual differences and their measurement: Intelligence and intelligence tests. Personality and its measurement. Part IV Relations with other people Social relations. Vocational adjustment. Mental hygiene and sane living. Part Knowing our world. The senses and sensations—the avenues of knowledge. Observation—attention and perception. Learning. Thinking and imagination. Glossary of psychological terms. References for further reading. Index.

Note: An introductory textbook for the serious general reader and for adult education classes. The author not only reveals the content of general psychology but does so in such way that it can be applied by the reader in his daily life. In its scientific accuracy the book compares favorably with contemporary college texts. Each chapter is equipped with an outline and list of review questions.

DENNIS WAYNE AND OTHERS

Current trends in psychology Pittsburgh University of Pittsburgh Press 1947 225 p. illus. 22 cm. $3.50 1436

Contents: Psychology as profession, by W Dennis. Experimental psychology by B. F Skinner Child psychology by R. R. Sears. Clinical psychology by E. L. Kelly Psychotherapy by C. Rogers. Personnel psychology by J. C. Flanagan. Human engineering, by C. T Morgan. The sample interview survey by R. Likert.

Note: The papers in this volume were presented originally as lectures at conference sponsored by the University of Pittsburgh in March, 1947 Each paper was prepared by leader in the field, and each presents survey of the current status, problems, and future development of various branches of psychology Although written by specialists, and addressed mainly to advanced students and graduate workers in the field, technical phraseology has been kept to minimum, hence the book can be useful to mature general readers also. The chapters on psychotherapy and the sample interview survey contain bibliographies.

DENNIS WAYNE, editor

Readings in the history of psychology New York Appleton-Century-Crofts, Inc., 1948 585 p 25 cm. $4 75 1437

Note A chronologically arranged selection of sixty readings taken from classic works including papers, monographs, and books in psychology, with the purpose of tracing the growth and development of this science. The selections range in time from the 4th century B C. to recent times. The volume is intended chiefly for the orientation of college students who are majoring in psychology

HARRIMAN PHILIP LAWRENCE

The new dictionary of psychology New York Philosophical Library 1947 364 p 24 cm. $6.00 1438

Note: About 2300 terms which are well established in modern psychological literature are defined in this reference book. The definitions are concise, but fair number are one-quarter page length, and some are longer Thumbnail sketches of the contributions of outstanding authorities in the field of psychology are included. The work is intended for the use of student and graduate psychologists.

LECRON, LESLIE M , AND JEAN BORDEAUX

Hypnotism today Foreword by Milton H. Erickson. New York Grune & Stratton 1947 278 p 21 cm. $4.00 1439

Contents: Part 1, Hypnotism and suggestion Hypnotism today The background of hypnotism. Inducing hypnosis. Suggestibility Principles of suggestion. Hypnotic phenomena. Posthypnotic suggestion, autohypnosis and autosuggestion. Theories of hypnosis. Hypnotism and the psychic sciences Part II, Hypnotherapy: Abnormal psychology—functional diseases. Psychotherapeutic methods. Functional hypnotherapy A system of brief hypnoanalysis. Psychosomatic hypnotherapy Research in hypnotism. References. Index.

Note: Most of the extensive literature dealing with hypnotism was produced during the years 1890–1920 and therefore is considerably out of date today The present volume aims to present the modern aspects of hypnotism and to place it on scientific basis, free of the misconceptions and misrepresentations with which it is usually surrounded. Actual details of how to hypnotize are described along with results of the more important experimental work carried out in psychological laboratories. Because the authors are both experienced consulting psychologists, they have stressed the psychotherapeutic possibilities of the subject. Although the book is phrased in popular language, it is intended as textbook for students and workers interested in psychology and psychotherapy

WOODWORTH ROBERT SESSIONS

Contemporary schools of psychology Revised edition. New York The Ronald Press Company 1948 279 p illus. 21 cm. $3.25 1440

Contents: Our schools and their background. Functional and structural psychology Associationism old and new Behaviorism. Gestalt psychology Psychoanalysis and related schools. Hormic and holistic psychologies. The middle of the road. Bibliography Author index. Subject index.

Note: Outlines of the theories of the major schools of psychology and brief biographical sketches of the psychologists he contributed to them are provided in this book. It was first published in 1931. The author points out that the schools of thought discussed in the first edition still flourish today and furthermore no new ones of major significance have developed in the interval. However the teachings of some of the schools have undergone considerable modifications and number of important new studies have appeared. These form the subjects of the considerable amount of material that has been added in this extensively revised edition. The revision has also entailed the removal of much obsolete material.

TEXTBOOKS

ANDREWS T G editor

Methods of psychology New York John Wiley and Sons, Inc. 1948 716 p illus. 23 cm. $5.00 1441

Contents: An introduction to psychological methodology by T G. Andrews. Conditioning and motor learning, by W N Kellogg. Studying memory and transfer by C. E. Buxton. Studying human thinking, by E. Heidbreder Psychophysical methods, by L. L. Thurstone. Studying perceptual phenomena, by J J Gibson. Studying vision, by S. H. Bartley Studying hearing, by E. G. Wever. Studying the skin senses, by W L. Jenkins. Studying the senses of taste and smell, by C. Pfaffmann. Studying proprioception, by W D Neff. Studying animal behavior by H. F Harlow Motivation, feeling, and emotion, by P T Young Methods of measuring and recording action, by R. C. Davis. Studying neuropsychology and bodily functions, by D B. Lindsley Studying motor functions

and efficiency by A. G. Bills. Investigating and appraising intelligence and other aptitudes, by Herbert S. Conrad. Investigating and appraising personality by S. Rosenzweig. Methods and techniques in clinical psychology by the late A. W. Brown. Objective studies of disordered persons, by J. Zubin. Methods of studying the behavior and development of young children, by H. L. Koch. Studying social behavior by T. M. Newcomb. Index of names. Index of subjects.

Note. A manual of laboratory techniques and of experimental and testing methods. It is intended chiefly for use in courses offered to students who are preparing to become professional workers in psychology. Each paper is accompanied by selected list of the related literature.

BENTLEY JOHN EDWARD

General psychology principles and practice. 57 illustrations including two color plates Philadelphia J B Lippincott Company 1947 389 p illus. (part col d) 21 cm. $3.50 1442

Contents (abridged) What is psychology? Part One, The organic basis of human psychology The human organism—the physiological foundation of psychology The determinants of psychological activity The response process Part Two, Sense activity and sense experience Vision—the experience of sight. Audition—the experience of sound. Taste and smell. Cutaneous, tactual sensitivities—the experience of touch. Motor senses. Organic sensations. Part Three Learning Perceptual response Memory Emotion. Learning. Thinking. Points of law in psychology Part Four Personality adjustment Human behavior and personality Kinds of personality The psychological measurement of personality Personality and human adjustment. Part Five, Applications of psychology to nursing The meaning of psychology for nurses. Clinical psychology Psychoanalysis Psychology and public health. Glossary of words and phrases. Index.

Note. An introduction to the subject in which many aspects and applications of psychology are explained rather briefly and the relationship of physiology to psychology is stressed. The book is intended mainly for student nurses. The author is Professor of Psychology in the American University Washington, D. C.

BORING EDWIN GARRIGUES AND OTHERS editors

Foundations of psychology Edited by Edwin Garrigues Boring Herbert Sidney Langfeld and Harry Porter Weld New York John Wiley and Sons, Inc. 1948 632 p illus. 25 cm. (Wiley publications in psychology Herbert S Langfeld advisory editor) $4 00 1443

Contents The nature of psychology The response mechanism. Response. Growth and development Feeling and emotion Motivation Learning Retention and transfer of learning. Recollecting, imagining and thinking Perception. Sensation and psychological measurement Color Visual space perception Hearing Taste and smell. Somesthesis Topographical orientation. Individual differences. Heredity and environment. Efficiency Personality Personal adjustment. Vocational selection. Attitudes and opinions Social relations of the individual. Index.

Note (3041) An introductory textbook of rather broad scope It is intended to replace the editors' *Introduction to psychology* New York, 1939 as book for first courses in which the primary aim is to give the student an inclusive and authentic view of the more widely accepted psychological knowledge Controversial issues and the special emphases of individual schools are avoided. The original drafts of the chapters were prepared by nineteen outstanding contemporary psychologists, and these were then edited and revised in order to make the book consistent throughout Only small fraction of the material has been carried over from the earlier work.

GOODENOUGH FLORENCE LAURA

Developmental psychology an introduction to the study of human behavior Second edition. New York D Appleton-Century Company, Incorporated 1945 723 p illus. 22 cm (The Century psychology series R. M Elliott, editor) $4 00 1444

Contents (abridged) Part I, Principles and methods of modern psychology Part II, The child's equipment for living: Our hereditary background. Prenatal development. The child at birth. How activity is patterned. Part III, The normal course of human development: The period before speech. The beginnings of speech. Physical growth and motor development during early childhood. Social and emotional behavior of young children. The growth of perception judgment and understanding in childhood. General intelligence and its measurement in early childhood. Developmental progress during the period of middle childhood. Adolescence. The college years. Maturity The maturation and decline of abilities. Old age. Part IV Personality deviations: Common handicaps of normal people. Mental disease. Juvenile delinquency and adult crime. Part The mental hygiene of development Bringing up children. Increasing happiness and efficiency in the adult. A backward look with thoughts for the future. Index of names. Index of subjects.

Note (3050a) A textbook designed for introductory courses in colleges. In it psychology is viewed as the study of the growing and changing reactions of human beings throughout the life span. This edition has been expanded and revised to cover pertinent advances in psychology between 1934 and 1945. The number of pages in the volume has been increased by more than one hundred.

JOHNSON, DONALD MCEWEN

Essentials of psychology an introductory textbook. New York McGraw Hill Book Company Inc. 1948 491 p illus. 24 cm. (McGraw Hill publications in psychology J F Dashiell consulting editor) $3 50 1445

Contents Introduction. The biology of motives and emotions. Motivation and emotion in social life. Sensory functions Attention. Perception. Learning Thought and judgment. The individual and society Abilities and tests. Personality—the climax of the story Abnormal personalities References. Glossary Audio-visual aids. Index.

Note. Selected contributions from experimental psychology clinical psychology psychoanalysis, and factor analysis have been synthesized in this book so as to give the reader general view of psychological principles, methods, and applications. The work is designed for use by freshman and sophomore college students and is equipped with such apparatus as chapter summaries and work lists to facilitate study The author is member of the faculty of the University of Minnesota at Duluth.

MUNN NORMAN LESLIE

Psychology the fundamentals of human adjustment. Under the editorship of Leonard Carmichael. Boston Houghton Mifflin Company 1946 497 p illus. 25 cm. $4 00 1446

Contents (abridged) Part One Scope and methods of psychology: How the psychologist works Part Two, Psychological development. Origin and psychological significance of response systems. From conception to maturity Factors in psychological growth. Part Three, Learning, remembering, and thinking: The conditioned response. Acquiring skill. Foundations of learning. Thinking Part Four Motivation of behavior: Physiological drives. Common social motives. Personal motives. Conflict. Part Five, Feeling and emotion. Part Six, Knowing our world Perceiving. Vision. Hearing. Our other senses. Part Seven, Individual differences Introduction to statistical analyses of individual differences. Intelligence. Personality Index of names. Index of subjects.

Note An exceptionally full introduction to modern psychology is provided in this textbook. The author has covered not only the basic principles but has devoted considerable space to descriptions of experimental methods. The text holds the reader's interest with quality that is partly due to the apt introduction of experimental results into the discussions. The pages are printed in double columns, and there is considerably more text than the number of pages might indicate. The book is particularly suitable for use in "cultural" courses offered to students who are planning to enter professions other than psychology but it can be used also in first courses for students who are preparing to major in the subject. There are abundant references to the related literature.

RICHARDS THOMAS WILLIAM

Modern clinical psychology New York McGraw Hill Book Company, Inc., 1946. 331 p 23 cm. (McGraw Hill publications in psychology J F Dashiell consulting editor) $3 50 1447

Contents Introduction to clinical psychology as a specialty Orientation to clinical psychology Methods of psychological appraisal. Approach to the patient. Physical examination. Appraisal of capacity—methods of study Appraisal of capacity—inadequacies of capacity Appraisal of motivation—methods of study Appraisal of motivation—inadequacies of motivation. Appraisal of control—general considerations and clinical methods of study Appraisal of control—anxiety and its solutions. Appraisal of control—the series of inadequate solutions from the socially oriented to the personally elaborated. Precipitation and predisposition. Readjustment. Appendix. Bibliography List of visual aids. Index.

Note: A compact introduction to this branch of psychology It is designed especially for third year undergraduate college students who are preparing to specialize in psychology or in some other profession where a knowledge of clinical psychology will be useful. The major portion of the text consists of descriptions of methods which are used in the appraisal of the intellectual capacities, motivation, and control of maladjusted persons. For an introductory book the bibliography is extensive.

RUCH FLOYD LEON

Psychology and life, including illustrated reference manual The brain and nervous system. Third edition. Chicago Scott, Foresman and Co 1948 782 p illus. (part col d) 24 cm. $3 75 1448

Contents Part I, Introduction. Psychology as science. The management of learning. Part II, Endowment and environment Nature and nurture—how we develop. Motivation biological and social. Emotions—inner springs of action. Intelligence. Part III, Knowing our world. The sensory processes. Perception attention and report. Learning—its basic nature. Remembering and thinking. Part IV Emotional adjustment: Emotional development—experimental findings. Emotional development—clinical findings. Reactions to frustration. Psychotherapy and readjustment. Part The individual and the group Individual differences and their measurement. Problems in human relations. Psychology and industry Psychology and social issues. Part VI, Illustrated reference manual—the brain and nervous system An overall view of the nervous system. The components of neural functioning. The brain. What goes on in the brain during thought. How the nervous system functions in emotion. Recommended readings. Index.

Note (3067) This college text for a course in elementary psychology is exceptionally attractive and readable. Aiming specifically to meet the needs of undergraduates, the author employs several devices to avoid "textbookishness" and to hold the reader's interest. Emphasis is laid on personal and social adjustment the presentation is informal, and the numerous photographic illustrations are arresting and pertinent. For students who want to undertake for their general reading in certain phases of psychology that interest them a list of over 100 books is provided An additional bibliography of more than 600 magazine articles is furnished in a second list which contains complete citations for all authorities mentioned in the text.

TIFFIN JOSEPH AND OTHERS

The psychology of normal people, by Joseph Tiffin Frederic B Knight and Eston Jackson Asher Revised edition Boston D C Heath and Company 1946 581 p illus. 23 cm. $4 40 1449

Contents What is psychology? Differences between people—how they affect our behavior Differences in environment—how they affect our behavior Personality and adjustment. Personality—how we judge and measure it. Intelligence—how we adjust ourselves to new situations Abilities, aptitudes, and interests—how we measure them. Our feelings and emotions. Attention—how we direct our energies Learning—how we change our behavior Memory—how we retain the past and are influenced by it. Perception—how we know the world about us. Imagination—when and why we make up things in our imagination and dreams. Reasoning—how we make, or should make, our decisions. Speaking, reading, and writing—how we express ourselves. References. Index

Note: (3073) An introductory college textbook, in which the authors' stated purpose is "to give students the insight into human nature which will prepare them for acceptable service in business, industry and the professions." However, the book deals with fundamental principles and methods and only incidentally with applications to such fields as advertising. This edition has been considerably revised, rearranged, and enlarged, and is now about sixty pages longer. Among the topics on which material has been added are aptitude and ability measurements, personality evaluation, emotion, thinking, and intelligence.

WOODWORTH ROBERT SESSIONS AND DONALD GEORGE MARQUIS

Psychology Fifth edition. New York Henry Holt and Company 1947 677 p. illus 22 cm. $4 75 1450

Contents The aim and method of psychology Individual differences in ability The correlation of abilities. Personality Physiological and social factors in personality Heredity and environment as causes of individual differences. Interaction with the environment. The nervous system. How the individual develops. Motives. Feeling and emotion. Choice, conflict, frustration. Observing. The sense of sight. The other senses. Learning. Memory Thinking. Questions and exercises. References. Index of authors. Index of subjects.

Note. (3074a) The fifth edition of this standard introductory textbook shows many changes from the fourth edition. There has been a general rearrangement of material in addition to eliminations and additions. The chapters have been reorganized and the names as well as content of many of them changed. Newly added are the analytical summaries at the ends of the chapters. The references have been assembled chapter by chapter at the end of the book and provided with a separate index of names.

PHYSIOLOGICAL PSYCHOLOGY

BEACH, FRANK AMBROSE

Hormones and behavior a survey of interrelationships between endocrine secretions and patterns of overt response. With a foreword by Earl T Engle. New York Paul B Hoeber Inc. Medical Book Department of Harper & Brothers, 1948 368 p 24 cm. $6 50 1451

Contents Foreword, by Earl T Engle. Courtship and mating. Reversal or bisexuality of mating behavior. Oviposition, parturition, and parental behavior Migration. Generalized aggression social dominance or submission, and territory defense. Emotion. Conditioning and other types of learning. General locomotor activity Homeostasis, metabolism, metamorphosis, and moulting. Morphologic structures employed in specific behavior patterns. The role of nervous stimulation. Developmental aspects. Major sources of variability Interpretations of hormonal effects. Bibliography Glossary Index.

Note A useful summary of the current knowledge of the effects of hormones on animal behavior Essentially it is a digest of the published literature, but there is a moderate amount of critical comment by the author References to original publications are incorporated directly in the text and the full citations, including the titles of the articles, are given in the 45-page bibliography The book is written in scientific terminology and is intended for scientifically trained readers. The author is Professor of Psychology at Yale University

CAMERON, DONALD EWEN

Remembering. New York Nervous and Mental Disease Monographs, 1947 110 p. 24 cm. (Nervous and mental disease monographs No 72) $4.50 1452

Contents Background to remembering. Current concepts of remembering Working concepts. Primary reaction. Integration. Reactivation. Remembering and forgetting as therapy Remembering and social structure. Index.

Note. A series of new working concepts on remembering is described in this book for psychologists and advanced students of psychology The trends of studies which led to their development began during a period of work upon senile and arteriosclerotic breakdowns, in which it became apparent that the current working hypotheses about remembering were inadequate to account for many of the phenomena encountered. Bibliographies appear at the ends of the chapters.

FREEMAN GRAYDON LA VERNE

The energetics of human behavior Ithaca, N Y Cornell University Press, 1948 344 p. illus. 21 cm. $3.50 1453

Contents. Systematic behavior theory. The organismic energy system. The homeostatic response curve. Principles of homeostatic behavior. Motivation. Learning. Discriminatory and nondiscriminatory behavior. Personality differentiation. Behavior disorder and therapy. Appendices: The psychosomatic relationship. Experimental studies in energy mobilization and discharge. Index.

Note. A systematic statement of the view that "objective measures of energy mobilization and discharge supply an essential base for the theory of personality structure. The work is based on extensive physiological research by the author and others, and it is of special interest because of the indicated interdependence of the psychological aspects of personality and physiological factors. It is expressed in very technical language and is intended for advanced students and professional research workers in the field. Appendix II is bibliography of published results of pertinent investigations.

FREEMAN, GRAYDON LA VERNE

Physiological psychology New York D Van Nostrand Company Inc., 1948 530 p. illus. 23 cm. $4 50 1454

Contents (abridged) Part I, Basic mechanisms in behavior: The field of physiological psychology. Basic relations in neural tissue. Gross features of neuromuscular action. Receptor mechanisms. Effector mechanisms. Adjustor mechanisms. Part II, The structuro-functional organization of bodily mechanisms: Stratification of reaction patterns. The spinal cord and nerves. The sympathetic ganglia and nerves. Medulla oblongata and cranial nerves. The cerebellum. The midbrain and thalamic regions. The cortical hemispheres. Afferent and efferent conduction systems. Part III, The integrative action of bodily mechanisms: Spinal integration. Integration at the subcortical level. Integration at the cortical level. Equilibrium, competition, and dominance. Facilitation and inhibition. Part IV Bodily mechanisms and variable behavior. Motivation. Neuromuscular sets and postures. Learning. Decrement—fatigue and oscillation. Personality. Author index. Subject index.

Note: Although this volume is essentially revision of the author's earlier book, *Introduction to physiological psychology* New York The Ronald Press Co., 1934 the original material has been so revised and reworked in the light of recent knowledge as to constitute new work. The purpose of the text is to provide psychologists with review of physiological facts and theories pertinent to their field, and to present in systematic form study of "the relationship between integrated behavior and bodily processes of the intact organism. The book will be of value as text for students of psychology medicine, education, and sociology

KANTOR, JACOB ROBERT

Problems of physiological psychology Bloomington Indiana Principia Press Inc. 1947 398 p illus. 24 cm. $5.00 1455

Contents: Section I, The historical background f physiological psychology Problems and paradoxes of physiological psychology Philosophical and scientific backgrounds of physiological psychology The British tradition of physical investigation and biological evolution of mind. The Continental tradition of laboratory physiology The historical sum and division of physiological psychology Philosophy and psychological science The brain in the history of science The biology and psychology of the nervous system. Section II, Analytic survey of the data and constructions of physiological psychology Analysis of scientific physiological psychology General physiological psychology Sensory physiopsychology Psychophysiology Psychoneurology Experimental psychoneurology Clinical psychosurgery Psychochemistry Psychobiology Psychosomatic medicine Section III, Suggestions for the concretion of physiological psychology Toward an authentic physiological psychology Bibliography and author index. Subject and name index

Note In this work the author's purpose is to define the meaning of physiological psychology and to describe the types of problems with which this branch of psychology is concerned He traces the development of the science from its earliest beginnings, and discusses the methods and techniques which have been evolved and hich are now generally employed Although the book serves as an introduction to the subject, the treatment is such that it will be of interest primarily to professional psychologists and advanced students. A 33-page bibliography is keyed to the textual material

KINSEY ALFRED CHARLES AND OTHERS

Sexual behavior in the human male by Alfred C Kinsey Wardell B Pomeroy and Clyde E. Martin. Philadelphia W B Saunders Company 1948 804 p illus. 24 cm. $6 50 1456

Contents: Part I, History and method Historical introduction. Interviewing. Statistical problems. Validity of the data. Part II, Factors affecting sexual outlet Early sexual growth and activity Total sexual outlet. Age and sexual outlet. Marital status and sexual outlet. Age of adolescence and sexual outlet. Social level and sexual outlet. Stability of sexual patterns. Rural-urban background and sexual outlet. Religious background and sexual outlet. Part III, Sources of sexual outlet. Masturbation. Nocturnal emissions. Heterosexual petting. Pre-marital intercourse. Marital intercourse. Extra-marital intercourse. Intercourse with prostitutes. Homosexual outlet. Animal contacts. Clinical tables. Appendix on sample size. Bibliography Index.

Note. Although not published until January 1948 this work is already widely known through the literate world. Many more copies have been sold than are usually sold of important literary works during the entire lifetime of the author. Nevertheless, it is not sensational popularization but factual report and interpretation of data collected in carefully planned program whose sole object is to collect information. The authors are members of the faculty of Indiana University and the study has been supported by the National Research Council's Committee for Research on Problems of Sex. The present volume is based on interviews with 5,300 white males. Volumes planned for subsequent publication will present data on female sexual behavior and on specialized topics such as legal aspects of sex behavior and prostitution.

WORTIS SAMUEL BERNARD AND OTHERS

Physiological and psychological factors in sex behavior New York The New York Academy of Sciences 1947 62 p 23 cm. (New York Academy of Sciences. Annals. Vol. 47 p 603–664 1947) Paper $1 25 1457

Contents: Introduction to the conference, by S. B. Wortis. Part I, Animal sex behavior Animal endocrines in relation to sexual behavior, by W C. Young Sex behavior in primates, by W E. Galt. Part II, Human sex behavior: Sex behavior in the human animal, by A C. Kinsey Aberrant sex behavior in humans, by M. Harrison. Sex and culture, by G. Bateson.

Note The purpose of these papers, presented originally at conference held in March, 1946 under the auspices of the New York Academy of Sciences, is to demonstrate, on the basis of scientific fact, the need for change in man's attitude toward sex behavior and, eventually in the law concerned with sex matters. Problems of animal and human sex behavior are discussed separately in the light of recent psychological and physiological findings.

PSYCHOLOGY OF PERSONALITY

BELL JOHN ELDERKIN

Projective techniques a dynamic approach to the study of the personality New York Longmans Green and Co 1948 533 p illus. 21 cm. $4.50 1458

Content (abridged) An introduction to projective techniques. Part I, Word association and related techniques: The incomplete sentences test. The tautophone test. Storytelling and completion. Part II, Visual stimulus techniques: The Rorschach technique. Cloud pictures The thematic apperception test. Rosenzweig picture-frustration study The Szondi test. Part III, Expressive movement and related techniques: The analysis of handwriting. Mira myokinetic psychodiagnosis. Visual-motor tests. Drawing, painting, and other arts. Finger painting. The mosaic test Voice and speech. Part IV Play drama, and related techniques. The world test. The psychodrama. Part The field of projective techniques: Subject index. Name index.

Note This work is an excellent review of the major techniques in psychological testing based on projection, and as critical but essentially sympathetic resumé of the work done in the field to date it serves as valuable guide and reference book to advanced students, research workers, and professional psychologists. The techniques included are discussed historically descriptively and critically treatment of methods of administration, interpretation, and application is adequate. Evaluation of these aspects of the tests is not limited to the author's own point of view but includes careful

summary in each instance of others' critical opinions. In addition full list of references follows each method studied. The final chapter is summary of achievements and failures in the use of projective techniques generally and thoughtful statement of the kind of research needed to make present practices more effective and meaningful.

CATTELL RAYMOND BERNARD

Description and measurement of personality Yonkers N Y World Book Company, 1946 602 p illus 21 cm. (Measurement and adjustment series edited by Lewis M Terman) $4.20 1459

Contents: Editor's introduction. The enterprise of describing, diagnosing, and measuring personality. The nature and varieties of clinically distinguishable personality forms. Description of the principal pathological syndromes, neurotic and psychotic. The nature of traits. Basic methods for definining and measuring common and unique traits. Systematization of description and measurement scales. The predictive convenience of condensed modalities and other trait subdivisions. The principal surface traits discovered through behavior ratings. The principal source traits discovered through behavior ratings. The principal source traits based on self-inventories. The principal source traits discovered through objective test measurements. The established primary traits: their measurement and use in personality predictions. Bibliography. Subject index. Index of names.

Note. The author deplores the unsystematic and unscientific manner in which many studies of personality have been undertaken; and on the basis of his own research and review of the literature of the subject outlines methods and techniques for more scientific personality description. The final chapters constitute catalogue of syndromes, factors, and traits which may be applied in the measurement and prediction of personality. The author leans heavily upon mathematical techniques, especially factor analysis. Criticisms of poor descriptive and measurement studies are based particularly on this approach. While highly technical, the book is of interest to professional psychologists, psychiatrists and advanced graduate students.

HEATH CLARK WRIGHT

What people are a study of normal young men, by Clark W Heath in collaboration with Lucien Brouha, Lewise W Gregory, Carl C. Seltzer Frederic L. Wells and William L. Woods. The Grant Study Department of Hygiene, Harvard University Cambridge, Mass. Harvard University Press, 1945 141 p. illus 21 cm. $2 00 1460

Contents (abridged) Section I, Introductory Grant Study concept of "normal. Aims and purposes. Nature of approach. Organization and general plan of work. Selection of participants. Methods of examining participants. Section II, Description of normal young men from the point of view of different disciplines. Description of normal personality. Description of manner of adjustment to certain conditions. Discussion of certain adjustment phenomena primarily intrapersonal. Description of the group by socio-economic findings. The morphological approach. Physiological considerations. Medical considerations. Considerations from the field of mental measurement. Section III, Miscellaneous considerations and further discussion of nature of work. General considerations from combined observations of separate disciplines. Corroboration of earlier judgments through follow-up information. Appendices. Psychiatric data—distribution of personality traits of Grant Study participants. Selected socio-economic data. Selected morphological data. Selected physiological data. Selected medical data. Scores of Grant Study participants in selected tests of mental function. Personality summary. Tables.

Note. A condensed preliminary report on study carried out at Harvard University from 1938 to 1942 relating to the nature and needs of normal young men. For the purposes of the study "normal" is defined as the "balanced person whose combination of traits of all sorts allows him to function effectively in variety of ways. The book describes the methods used, and summarizes the findings regarding the physical and mental development, behavior, aptitudes, interests, and other vital characteristics of the 268 students examined during this period. Even though the investigation is limited to rather small, select group, the report is an important contribution to the knowledge of personality. The study is not yet complete and further publications will report on the careers of these 268 participants for at least another 15 or 20 years.

HOOTON EARNEST ALBERT

'Young man, you are normal." Findings from a study of students. New York G P Putnam's Sons, 1945 210 p illus. 20 cm. $2.50 1461

Contents Introduction "Is there normal man in the house?" Part I, What the "normal" young men are like: Their physiques. Their health. Their social and economic backgrounds. Their intelligence. Their personalities. Their tastes and activities. Their worries and problems. Their religious beliefs and attitudes. Part II, How the elements are mixed in "normal" youths: Physique, fitness, and health. Physique and personality. Physique and social capacity. Physique and intelligence. Personality physiology and health. Personality background, and social capacity. Personality and intelligence. Intelligence and social background. Differentiation by religious affiliation. Part III, Conclusions and speculations: how to help men find themselves: The continuing careers of the normal young man war records. The little we know types of the normal young men. What can be done with individuals, taken "as is. What we must learn before we produce better men.

Note. A popular interpretation, aimed at lay readers, of the preliminary findings of the Grant Study being carried on at Harvard University. It is based on the same data that are presented for scientifically trained readers in Heath and others, *What people are,* described above.

KLUCKHOLM, CLYDE, AND HENRY A. MURRAY editors

Personality in nature, society and culture. New York Alfred A. Knopf 1948 561 p 25 cm. $6 00 1462

Contents (abridged) Part One: Outline of conception of personality by H. A. Murray and Clyde Kluckhohn. Part Two, The formation of personality—Section II, Constitutional determinants: The genetic factor in autonomic nervous-system function, by H. Jost and L. W Sontag. The genetic theory of schizophrenia, by F G. Kallmann. The relationship between the masculine component and personality by C. C Seltzer Psychosomatic studies of some aspects of maternal behavior by D. M. Levy —Section III, Interrelations between constitutional and group-membership determinants: Anthropological data on the problem of instinct, by M. Mead. Cultural control and physiological autonomy by L. K. Frank. Biography and biology by A. M. Tozzer. —Section IV Group-membership determinants: Personality formation from the comparative cultural point of view by J Gillin. Doll play of Pilagá Indian children, by J. Henry and Z. Henry Social class and color differences in child-rearing, by A. Davis and R. J Havighurst. —Section Role determinants: Age and sex in the social structure of the United States, by T Parsons. Bureaucratic structure and personality by R K. Merton. —Section VI, Situational determinants: The relation of birth to behavior by L. S. Wile and R. Davis. Educative influence of personality factors in the environment, by F Alexander. Personality under social catastrophe ninety life-histories of the Nazi revolution, by G. W Allport and others —Section VII, Interrelations between the determinants: Some psychosomatic aspects of childhood, by L. W Sontag. Individual and social origins of neurosis, by Erich Fromm. Some problems of personality development among Negro children, by B Dai. American status systems and the socialization of the child, by A. Davis. Part III, Some applications to modern problems: The channeling of Negro aggression by the cultural process, by H. Powdermaker. Hitler's imagery and German youth, by E. H. Erikson. The scientific approach to case work, with special emphasis on psychoanalysis, by R. Waelder. A critique of cultural and statistical concepts of abnormality by H J Wegrocki. Index.

Note. A collection of periodical articles, book chapters, etc., which bear on present-day concepts of personality formation. The material has been selected chiefly for the use of college students majoring in sociology or psychology.

MURPHY GARDNER

Personality a biosocial approach to origins and structure. New York Harper & Brothers, 1947 999 p 24 cm. $7.50 text edition, $5.00. 1463

Contents (abridged) Part One, Organic foundations: The organism. Heredity and individual growth. The elementary biology of motivation. The biology of motive patterns. Organic traits and their measurement. Part Two, Learning: Canalization. Conditioning. The

hierarchy of conditionings. Conflict. Part Three, The personal outlook Imagination and thought. Multiple personality Creativeness. Part Four The self: The evolution of the self. Enhancement and defense of the self. Psychoanalytic mechanisms. Extroversion-introversion. Part Five, Wholeness Personality structure. Projective methods with adults. Projective methods with children. Discontinuity and typology Part Six, Individual and group Group membership. Economic determinism. The family as mediator of culture. The skeptical psychologist. References. Bibliography Name index Glossary and subject index.

Note The outgrowth of many years of teaching, writing, and study in the field, this book is an excellent synthesis of what might easily be half dozen separate studies, yet it is neither hurried nor objectionably superficial. The clinical aspects of psychology and related problems are not treated as such Instead the author presents thoroughly and skillfully in logical sequence study of the biological, psychological and social forces which determine human personality The volume is objective and scholarly Supplementary aids include careful documentation, an exhaustive bibliography and useful glossary In the final chapter the author points out the inadequacy of our present knowledge of human personality and pleads for more fundamental research.

Saul Leon Joseph

Emotional maturity the development and dynamics of personality Philadelphia J B Lippincott Company 1947 338 p illus. 24 cm. $5 00 1464

Contents (abridged) Part One, The achievement of maturity: Emotional development and preventive psychiatry Part Two, Emotional forces in the development of personality The need for love. Egoism, competitiveness and the sense of inferiority Training and conscience. Sexuality Persistence of childhood patterns Part Three, The nature of neurosis: Specific emotional vulnerability Hostility and guilt. Weakening self-control. Fight and flight. Court-martial cases. The use of dreams. Treatment. Part Four The dynamics of personality· Determinants of personality The operation of the mind Genesis of emotional disturbances. Index.

Note Written for laymen, this book discusses and explains, in terms of psychoanalytical concepts and principles, the forces and desires that underlie and shape personality and character A considerable part of it is devoted to discussions and illustrations of aberrant behavior in its incipient neurotic stages rather than in the more advanced stages of psychosis. The discussions are somewhat more detailed and psychologically sophisticated than is common in popular books. It could well serv as an introduction to course of reading in abnormal psychology or psychoanalysis, however the list of references is not well chosen as additional reading for the type of reader to whom the work appeals.

Stagner Ross

Psychology of personality Second edition. New York McGraw Hill Book Company, Inc. 1948 485 p illus. 24 cm. (McGraw Hill publications in psychology J F Dashiell, consulting editor) $5 00 1465

Contents (abridged) Introduction The scientific study of personality Methods in the study of personality Description of personality: The nature of personality structure. Development of personality· basic patterns—simple learning—complex forms of learning. The organization of personality traits—the self Character. Attitudes and values. Type theories of personality Dynamics of personality· The biological basis of motivation. Contemporary theories of dynamics. A cultural interpretation of motivation. Determinants of personality· Biological factors Social determinants The school system. Economic factors. Personality and social class. Bibliography and author index. Subject index

Note (1134) A thorough and convincing study of normal personality The underlying theme is that the most important factor in the shaping of the personality is the social environment but all of the outstanding theories bearing on the subject are examined in some detail and evaluated from the author' viewpoint. Only the normal personality is considered The second edition, the writing of which was started in 1941 but not completed until 1947 incorporates some material relating to the effects of World War upon individual personalities. The original text, largely behavioristic in orientation, has been extensively rewritten in order to take full advantage of recent developments in such aspects of the field as perception and projection testing, and to incorporate new experimental studies. The bibliography also has been revised to include references to the later literature. The book is written for undergraduates and beginning graduate students, but is not too difficult for other readers with background in social science

SOCIAL PSYCHOLOGY

Allport, Gordon Willard and Leo Postman

The psychology of rumor New York Henry Holt and Company 1947 247 p illus. 21 cm. $2 60 1466

Contents: Rumor in wartime. Why rumors circulate. Testimony and recall. An experimental approach. Results of the experiments: Leveling and sharpening. Results of the experiments: Assimilation. The basic pattern of distortion Rumor and society The analysis of rumor Bibliography Appendix. Index.

Note This book had its origin in series of experiments undertaken by the authors to investigate the problem of wartime rumors. The methods utilized and conclusions reached have been amplified to form basic text on the phenomena of rumor Considerable space is devoted to specific examples of the origin of rumors, and to descriptions of various tests which are employed to show how faulty memory and distorted testimony give rise to rumor

Barker Roger Garlock, and others

Adjustment to physical handicap and illness a survey of the social psychology of physique and disability by Roger G Barker Beatrice A Wright and Mollie R. Gonick. New York Social Science Research Council 1946 372 p. illus. 23 cm. (Social Science Research Council. Bulletin 55) Paper, $2.00 1467

Contents: Introduction. Somatopsychological aspects of normal variations in physique. Somatopsychological significance of crippling. Psychology of the tubercular Somatopsychological significance of impaired hearing. Social psychology of acute illness. Employment of the disabled. Bibliographies of literature on the somatopsychological significance of physique normal variations, orthopedic impairments, tuberculosis, impaired hearing, acute illness, employment, visual disability cardiac disability diabetes mellitus, cosmetic defect, rheumatism, cancer and miscellaneous references. Index.

Note. A well-documented critical study in field that has been little explored to date. The authors have surveyed the pertinent literature and collected but is currently known of the relationships between social behavior and personality of the physically handicapped individual. The bibliography occupies fifty-two pages. The work has significance for medical practitioners, psychiatrists, psychologists, rehabilitation clinicians, and social case workers.

Doob, Leonard William

Public opinion and propaganda. New York Henry Holt and Co., 1948 600 p illus. 22 cm. $3 75 1468

Contents. The importance f people. Social behavior The nature of public opinion The cultural background of public opinion. The behavior of public opinion. Sampling public opinion. The mechanics of polling. The evaluation of polls Intensive measures of public opinion. The importance of public opinion. The nature of propaganda. The propagandist. The content of propaganda. The perception of propaganda. Personality and propaganda. The learning of propaganda. Propaganda and action. The printed media. Radio. The media of sight and sound. The value of analysis. References. Index.

Note. A searching analysis of the interrelations of public opinion and propaganda, written from the viewpoint of modern social science The techniques of modern propaganda, their effectiveness and limitations are described at length. Polls based on the questioning of selected samples of community as means of estimating public opinion are discussed from the same viewpoint and with equal thoroughness. The list of references is extensive. The work is suited to advanced students in sociology and to persons with professional interests in the subject.

Frank Lawrence Kelso

Society as the patient essays on culture and personality New Brunswick Rutgers University Press 1948 395 p 22 cm. $5.00 1469

Contents (abridged) Society as the patient. The cost of competition. The principle of disorder and incongruity. The significance of industrial integration. Social planning and individual ideals. Social change and the family. The management of tensions. Social order and psychiatry. Freud's influence on western thinking and culture. Freedom for the personality. Mental security. Mental health in schools. Art and living. Science and culture. The historian as therapist. Dilemmas of leadership. Man's multidimensional environment. The arts in reconstruction. World order and cultural diversity.

Note: The contributions of the author of this book to social psychology and the study of society are widely recognized. He terms his special viewpoint "the psychocultural approach," and points out that it utilizes the concepts and findings of psychiatry, psychoanalysis, and psychology along with those of anthropology and sociology. The essence of his viewpoint is that the psychology of society is not a separate entity but is a manifestation of the psychology of individuals. The essays in this book have appeared over a period of many years in numerous periodicals and are reprinted for the most part without textual changes.

KARDINER, ABRAM

The psychological frontiers of society. By Abram Kardiner, with the collaboration of Ralph Linton, Cora Du Bois and James West. New York, Columbia University Press, 1945. 475 p. 23 cm. $5.50 1470

Contents: Foreword, by Ralph Linton. Preface. Psychology and the science of society. The technique of psychodynamic analysis. The Comanche, compiled from information supplied by Ralph Linton. Analysis of Comanche culture. The Alorese, compiled by the author from seminar notes and from the book *The people of Alor*, by Cora Du Bois. Analysis of Alorese culture. Personality studies. Basic personality character value systems. New material, synthesis, and general conclusions to Alorese culture. Plainville, U. S. A., by James West. Analysis of Plainville. The personalities of Plainville. Conclusions to Plainville. Basic personality and history. Index.

Note. (1114d) The volume is an attempt to work out the technical problems originally outlined in the author's *The individual and his society*, New York, 1939. Three varied societies, that of the Comanche Indians, that of the Alor islanders in the Dutch East Indies, and that of Plainville, U. S. A., a contemporary American rural community, are used as clinical demonstrations of principles set forth in the earlier volume. The part of the author was to work out the psychological techniques employed and to select the cultures giving the best opportunity for refining and perfecting the techniques, the data being presented by three ethnographers, specialists in their fields.

KILPATRICK, WILLIAM HEARD AND WILLIAM VAN TIL, editors

Intercultural attitudes in the making: parents, youth leaders, and teachers at work. New York, Harper & Brothers, 1947. 246 p. 21 cm. (Ninth Yearbook of the John Dewey Society) $3.00 1471

Contents: Preface, by W. H. Kilpatrick. Basic principles in intercultural education, by W. H. Kilpatrick. Working with young children: Parents, by James L. Hymes, Jr. The primary teacher, by Helen Trager. Working with young adolescents: Adult-sponsored youth groups, by Bernice Bridges. The junior high school teacher, by Prudence Bostwick and Myrtle F. Sugarman. Working with youth: Groups, by Charles E. Hendry, Russell Hogrefe, and Edward Haydon. The high school teacher, by William Van Til. The school as a whole, by C. O. Arndt.

Note: Though addressed primarily to teachers and school officials, this book is also intended for all persons dealing actively with children and youth. The aim of the book is to describe the processes through which the attitudes of children and adolescents toward other groups are actually shaped. It examines the working of family, of autonomous and adult-sponsored groups, such as the Boy Scouts and the Y. M. C. A., and especially of the school in relation to children and youth, assuming that the intercultural attitudes of the child are in the making day by day through all the varied experiences that his life brings.

KRECH, DAVID AND RICHARD S. CRUTCHFIELD

Theory and problems of social psychology. New York, McGraw Hill Book Company, Inc. 1948. 639 p. 24 cm. (McGraw Hill publications in psychology. J. F. Dashiell, consulting editor) $4.50 1472

Contents: Part One, Basic principles: The field and problems of social psychology. The dynamics of behavior. Perceiving the world. Reorganizing our perceptions. Part Two, Social processes: Beliefs and attitudes of men. Development and change of beliefs and attitudes. The measurement of beliefs and attitudes. Public opinion research. Persuasion through propaganda. The structure and function of social groups. Group morale and leadership. Part Three, Applications: Racial prejudice in the United States. Controlling racial prejudice. Industrial conflict. International tensions. Name index. Subject index.

Note: An interesting, well-organized textbook. The authors hold that the only sound basis for an understanding of social behavior is a knowledge of individual perception and motivation; or in other words, that social psychology should and can be based on the experimentally-derived and widely-accepted knowledge of the behavior of individuals. However, their treatment assumes that the student will have the basic knowledge, and therefore the work is devoted mainly to discussions of social behavior in the light of this knowledge. There are good reading lists appended to the chapters.

LEIGHTON, ALEXANDER HAMILTON

The governing of men: general principles and recommendations based on experience at a Japanese relocation camp. Princeton, Princeton University Press, 1946. 404 p. 23 cm. $3.75 1472a

Contents: Introduction. The problem. Part 1, The story of Poston. Evacuation. Beginning of Poston. "Iriaka." Early days. Community planning. Self-government. Social organization. Social disorganization. First. Beginning of the strike. Deadlock. End of the strike. Self-management after the strike. Reconsideration. Part 2, Principles and recommendations: Fundamental postulate. Individuals under stress. Systems of belief under stress. Social organization under stress. Conclusion. List of references. Appendix: Applied anthropology in a dislocated community, by A. H. Leighton and E. H. Spicer. Index.

Note: The first part of this outstanding contribution to social psychology is a detailed study of events and the social factors that determined them at Poston, Arizona, one of the inland relocation centers to which persons of Japanese origin were removed from the Pacific coastal regions of the U.S.A. during World War II. The center was the scene of a "strike" against military authority which attracted wide attention. The sources of unrest which culminated in the strike are fairly analyzed and without attempt to gloss over mistakes made by U.S.A. authorities. In the second part the principles of social psychology which operate in communities organized under stress are stated and discussed from the viewpoint of just and efficient administration. The author is a psychiatrist and social anthropologist who was assigned to the relocation center to conduct research in its social phenomena and problems.

MERTON, ROBERT KING AND OTHERS

Mass persuasion: the social psychology of a war bond drive. By Robert K. Merton, with the assistance of Marjorie Fiske and Alberta Curtis. New York, Harper & Brothers, 1946. 210 p. illus. 21 cm. (Bureau of Applied Social Research, Columbia University Publications) $2.50 1473

Contents. A case of mass persuasion. The marathon: a temporal pattern. The bond appeals: a thematic analysis. War bonds and Smith imagery: a study in congruence. Gilt-edged bonds: the climate of decision. The social and cultural context. Moral persuasion: a technical problem and a moral dilemma. Appendices: The interview guide. Composition of informants. Statistical tables. Index.

Note. A scientific study of the workings of propaganda as exemplified in a phenomenally successful sales campaign. The campaign consisted of sixty-five separate radio appeals made in one day by the singer Kate Smith, and it resulted in the sale of about $39,000,000 worth of war bonds. Viewed as an outstanding example of mass persuasion, it was investigated in three ways: the contents of the broadcasts were analyzed, 100 persons who heard the broadcasts were interviewed at length as to their reactions to them, and about 1000 other listeners were asked specific questions about them. The results are presented in considerable detail.

NEWCOMB THEODORE MEAD AND OTHERS, editors

Readings in social psychology Prepared for the Committee on the Teaching of Social Psychology of The Society for the Psychological Study of Social Issues. New York Henry Holt and Company 1947 672 p illus. 24 cm. $4.30 1474

Contents: Uniformities and variations under differing social influences. Memory judgment, perception, motivation as influenced by social conditions. Socialization of the child Language. Suggestion, imitation, and sympathy Social frustration. Effects of group situations. Role and status. Leadership. Industrial morale. Social class. Prejudice. Mass communication and propaganda. Public opinion. Critical social situations. War and peace. Appendix Variation. Statistical measurements. Sampling Tests of significance.

Note. A book prepared for college and university courses in social psychology Each section consists of from two to nine selected articles by various present-day authors mostly reprinted from recent books and periodicals. The Society for the Psychological Study of Social Issues is responsible for the publication of the volume, the selections in which are representative of the reports of research in social psychology and of the methods by which its conclusions are reached. Most of the editorial work was carried out by the two cochairmen of the Editorial Committee, Theodore M. Newcomb and Eugene L. Hartley with the assistance of the twenty-five other members

SHERIF, MUZAFER

An outline of social psychology New York Harper & Brothers 1948 479 p illus 21 cm. $4 00 1475

Contents: Introduction. Part One, Motives The general problem of motives in relation to social psychology The place and effects of biogenic needs in the life of the individual The effects of deprivation at the human level. Part Two, Groups and norms Introduction. Properties of group situations in general. Effects of membership and other reference groups. The formation of group standards or norms. The formation and effects of concepts. Attitudes. Attitude formation and change. Ego involvements. Ego-involvements in personal and group relationships. Adolescent attitudes and identifications. Social distance. Part Three, Individuals and social change Introduction. The effects of technology Man in critical situations. Part Four Individual differences in social reactions Individual differences in social reactions Name index Subject index.

Note. A compact and fairly detailed statement of the main concepts and experimental results of contemporary social psychology The author is widely recognized for his own contributions to the field. The book is based partly on his two previous works, *A study of some social factors in perception* New York, 1935 and *The psychology of social norms* New York, 1936 but the original material has now been thoroughly rewritten and expanded in the light of more recent research Increased emphasis is now placed upon the significance of hunger fear affection and other elementary forces upon an individual' social behavior The book is designed for use as college text but is suitable for any mature reader who desires an authoritative survey There are numerous references to the related literature

SHERIF MUZAFER, AND HADLEY CANTRIL

The psychology of ego-involvements, social attitudes & identifications. New York John Wiley & Sons, Inc. 1947 525 p illus. 24 cm. $6 00 1476

Contents: Introduction The problem of attitudes—studied. Some experimental facts concerning the basis of attitudes. The attitude formulation extended to concrete situations The problem and general characterization of ego-involvements Experiments on ego-involvements. The genetic formation of the ego. Re-formation of the ego in adolescence Ego-involvements and identifications in group situations. Ego-involvements in concrete social situations. Breakdown of the ego Some illustrations from literature The ego in psychoanalysis Name index. Subject index.

Note A broad study written from the standpoint of social psychology It is based on large variety of information and examples drawn from the fields of anthropology ethnology sociology child study literature, and public opinion surveys. The final chapter points out the inadequacies of Freudian psychoanalysis in the psychology of the ego.

SYMONDS, PERCIVAL MALLON

The dynamics of human adjustment. New York D Appleton-Century Company 1946. 666 p 24 cm. (The Century psychology series Richard M. Elliott, editor) $5 00 1477

Contents Adjustment. Drives Frustration. Aggression. Punishment. Anxiety Defenses against anxiety Fixation. Regression. Repression and the unconscious. Displacement. Introjection and the superego. Projection. Identification. Conflict. Guilt and self-punishment. Sublimation. Reaction formation—reversal formation. Compensation. Rationalization. Miscellaneous mechanisms. Fantasy Love and self-love. Normality Bibliography Index.

Note A treatment from the psychoanalytical viewpoint of the dynamic or motivating factors that determine the adjustments of the human individual to mental and environmental situations. It is comparatively detailed, and familiarity with the basic principles and terminology of psychology has been assumed. The work is suitable for use as textbook in advanced undergraduate and graduate courses, and is useful also as informative reading by professional workers in such fields as social work where an understanding of the motivation of people is essential. The bibliography contains 841 entries, most of hich are annotated.

THOMASON, CALVIN CORNELIUS

Human relations in action problems and cases in dealing with people. New York Prentice-Hall, Inc. 1947 225 p illus. 21 cm. $2 65 1478

Contents Forward, by W W Charters. Human nature. The nervous system and habit. Learning Reliability of judgment. Remembering Emotional behavior Emotion and problem solving. Acting on suggestion. Factors in conduct. Personality Counseling and placement. Employee training. Incentives. Working conditions. Personnel. Appendix. Supervisory activities analysis. Index.

Note An introductory textbook, organized for use in classes and groups, where the method of teaching is based largely on group discussion. Each unit of instruction is built around specific topic The objectives in studying the topic are stated concisely as guide to both instructor and student, after which there is short exposition of applicable concepts. This preliminary material is followed by series of case histories for discussion. The book is based on material which was developed over long period of years at the Rochester Institute of Technology both in regular day classes, attended by undergraduate students, and in evening classes attended by men and women working in industry

UNIVERSITY OF PITTSBURGH

Current trends in social psychology Pittsburgh *University of Pittsburgh Press 1948* 299 p illus. 21 cm. $4 40 1479

Contents The new social psychology by W Dennis. A program of experimentation on group functioning and group productivity by R. Lippitt. Cultural diversity and world peace, by K. T Behanan. An approach to social perception, by J S. Bruner Experimental sociometry and the experimental method in science, by J L. Moreno. The social psychology of housing, by R. K. Merton. Communication research and the social psychologist, by P F Lazarsfeld. Psychological approaches to the prevention of war by J. G. Miller

Note A collection of papers hich were presented at the second of series of conferences held under the auspices of the Department of Psychology in the College of the University of Pittsburgh. Each lecture was prepared by an active worker in the field, and the discussions of the techniques, methods, and fields of study of social psychology are addressed both to professional psychologists and students All but two of the papers are accompanied by bibliographies.

WILLIAMS ROBIN MURPHY JR.

The reduction of intergroup tensions a survey of research on problems of ethnic racial, and religious group relations. Prepared under the direction of the Committee on Techniques for Reducing Group Hostility New York Social Science Research Council 1947 153 p 23 cm. (Social Science Research Council. Bulletin 57) Paper $1 75 1480

Contents: Introduction. Appraisal of programs in intergroup relations. Propositions on intergroup hostility and conflict. Selected possibilities for research. Summary and prospect. Appendix: Research approaches and techniques. Selected bibliography. Index.

Note: An outline of research problems issuing from the increasing awareness of racial, ethnic, and religious conflicts and from the activities of various agencies aimed at reducing the conflicts. A survey of the existing programs in the United States of America shows the need for clarification of their underlying assumptions, their specific goals, and the methods used to achieve the desired effects. While the basic propositions are subjected to critical analysis by the author himself, the chapters on possibilities for research and on research techniques point the way to the badly needed cumulative and systematic investigation of the limits and effects of practical action in this field. The book contains an extensive bibliography. In addition, those studies which deal with changes in intergroup attitudes are also presented in the form of table in the text.

CHILD STUDY

AXLINE VIRGINIA MAE

Play therapy, the inner dynamics of childhood with an introduction by Carl R. Rogers. Boston Houghton Mifflin Company 1947 379 p illus. 22 cm. $3 75 1481

Contents (abridged): Part One, Introduction. Part Two, The nondirective play-therapy situation and participants: The playroom and suggested materials. The child The therapist. An indirect participant—the parent or parent-substitute. Part Three, The principles of non-directive play therapy: Establishing rapport. Establishing feeling of permissiveness. Maintaining respect for the child. Therapy cannot be hurried. The value of limitations. Part Four Implications for education Practical schoolroom application. Application to parent-teacher relationships. Part Five, Annotated therapy records. Index.

Note: A student of Carl Rogers at Chicago University the author here describes the procedure followed in the Rogers plan of play therapy to restore maladjusted children to social normalcy giving full explanations of techniques and some evaluation of successes and failures. Two basic tenets underlie the system (1) attempt should be made, not to try to correct all the forces which have caused child' maladjustment, but to have the child accept his situation and himself and (2) in the play periods themselves the child must be allowed to plan and execute his own activities, with supervision but not direction from the therapist. There are practical explanations of how the therapist may work to accomplish the desired ends and several fully recorded reports of play periods conducted for specific cases.

BLACK IRMA SIMONTON

Off to a good start a handbook for modern parents Illustrated by Lydia Cooley New York Harcourt, Brace and Company 1946 256 p illus. 21 cm. $2.50 1482

Contents: Part I, The child himself and his habits Training and growth. Learning desirable ways. What about undesirable habits? Part II, The child in his family: Discipline and punishments. Social growth in the family Further sexual development. The precocious child Difficult days at home. Part III, Relations with other people. Different kinds of children. Grownups. Part IV Adventuring in the larger world New experiences. What about schools? Part Intellectual growth and self-expression. Acquiring information. Creative play and play materials. Bibliography Index.

Note: A simple discussion of child psychology for the everyday guidance of parents of infants and young children. Although based on the findings of modern psychiatry and psychology, the language is completely non-technical and care has obviously been taken to cover the situations that occur in average American homes. The author's background includes experience in nursery schools and special research in child guidance.

CARMICHAEL LEONARD editor

Manual of child psychology New York John Wiley & Sons Inc., 1946 1068 p. illus 22 cm. $6.00 1483

Contents: Methods of child psychology, by J. E. Anderson. The onset and early development of behavior, by L. Carmichael. Animal infancy by R. M. Crutchfield. The neonate, by K. C. Pratt. Physical growth, by H. Thompson. The ontogenesis of infant behavior by A. Gesell. Maturation of behavior by M. B. McGraw. Learning in children, by N. L. Munn. The measurement of mental growth in childhood, by F. L. Goodenough. Language development in children, by D. McCarthy. Environmental influences on mental development by H. E. Jones. The adolescent, by W. Dennis. Research on primitive children by M. Mead. Character development in children—an objective approach, by V. Jones. Emotional development, by A. T. Jersild. Behavior and development as a function of the total situation, by K. Lewin. The feeble-minded child, by E. A. Doll. Gifted children, by C. C. Miles. Psychological sex differences, by L. M. Terman, W. B. Johnson, G. Kuznets, and O. W. McNemar. A graphic age conversion scale, by D. McCarthy. Index.

Note. The editor has assembled here nineteen comprehensive accounts of the more significant aspects of child psychology each contributed by recognized authority. Each chapter follows, largely, the pattern of delineating past researches in its own area and summarizing present points of view. The result is kind of encyclopedic reference tool, which should be especially helpful to advanced students and beginning research workers. Very extensive bibliographies follow each chapter but there are relatively few references to studies conducted since 1940.

CHILD STUDY ASSOCIATION OF AMERICA INC.

Parents' questions. Revised edition New York Harper & Brothers 1947 256 p 21 cm. $3 00 1484

Contents: The question and the questioner. Habits and habit training. Discipline and authority. Healthy attitudes toward health. No two alike. Emotional growing pains. Sex in childhood. Character and spiritual growth. School and home. The child and the outside world. What is problem child? Parents as people. New vistas for the family—a postscript. Books for further reading. Index.

Note. A wide variety of child behavior problems which arise in everyday home situations are dealt with in this authoritative guide for parents. Each chapter begins with prefatory discussion of the physiological, psychological, and social principles which bear on the topic of the chapter. After this discussion questions which have been asked by parents are stated and are answered in detail. In preparing this edition two new chapters were added and the older ones were revised in various sections. The useful annotated list of books for further reading also has been revised.

COLE LUELLA

Psychology of adolescence Third edition. New York Rinehart & Company Inc. 1948 650 p illus. 22 cm. $4.00 1485

Contents. Introduction: Adolescence as period of human growth. Part I, Physical development: Bodily growth. Health and hygiene. Part II, Emotional development: Emotional growth. Emotions and the school. Emotional deviates. Part III, Social development: Social growth. The social life of the school. The adolescent and his home. Delinquency. Part IV Moral development: Moral growth. Community influence. Part Intellectual development: Mental growth. Intellectual-cultural interests. Intellectual deviates. Choice of vocation. The high school curriculum. Conclusion: The end of adolescence. Appendices. Index.

Note. (3191) A comprehensive picture of the adolescent years as written for prospective and professional teachers, parents, and adolescents themselves. The major physiological, social, moral, emotional, and intellectual factors that affect the mind and actions of the young from ages 13 to 21 are discussed. The presentation is practical, the language simple and direct, and the text is well illustrated with pertinent case histories, anecdotes, real life problems, charts, and other related material. This edition has been revised to include more recent and complete studies; and the appendix, in addition to well selected list of novels dealing with the problems and experiences of adolescents, now contains series of suggested questions and exercises for students. Each chapter closes with brief summary and list of references.

COLE LUELLA, AND JOHN J B MORGAN

Psychology of childhood and adolescence. New York Rinehart & Co., Inc., 1947 416 p illus. 22 cm. $3.50 1486

Contents: Physical growth. Motor development. Emotional growth. Motivation. Social growth. Homes for children and adolescents. Play and interests. Intellectual growth. Bright and dull children. Language. Growth in attitudes and behavior. Personality Readings. Index.

Note This volume is a reshaped and integrated version of two earlier books: John J. B. Morgan's *Child psychology*, New York Farrar & Rinehart, 1942 and Luella Cole *Psychology of adolescence*, New York Farrar and Rinehart, 1942 In its present form the book is designed for use primarily in teachers' colleges. The material is well organized and physical, emotional, social, and intellectual growth from infancy to maturity is explained in simple non-technical language. Brief chapter summaries and selected bibliography are included.

FAEGRE MARION ELLISON (LYON), AND JOHN E ANDERSON

Child care and training Seventh edition revised. Minneapolis Minn The University of Minnesota Press 1947 310 p illus 21 cm $3.25 1487

Contents The young child. How children grow General care, including diet and clothing Children's diseases How children develop mentally How children learn. Emotional behavior Learning good eating habits. Learning good sleeping habits. Eliminative and other early habits. Constructive discipline. Curiosity questioning, and sex education. Imagination, truth, and falsehood. Play Social development. Books and reading. The family Books dealing with the development and training of children Index.

Note (3140) A guide for parents in the care and training of children from the age of one to fourteen years. The material is based on the extension courses and study groups sponsored by the University of Minnesota and upon the questions asked by parents in these courses Psychological matters rather than physical care are emphasized, although there is considerable material on the latter In comparison to the preceding edition only slight changes have been made, but the text has been modified in a few places in the light of recent studies, and the bibliography has been slightly revised.

GARRISON KARL CLAUDIUS

The psychology of adolescence. Third edition. New York Prentice-Hall, Inc., 1947 355 p illus. 24 cm. $4 70 1488

Contents Part I, Introduction The adolescent age. Problems of adolescents. Part II, The development of the adolescent Physical development. Emotional growth. Mental development. Adolescent interests. Growth in attitudes and social behavior. Moral and religious development Part III, Personality development during adolescence The adolescent at home The adolescent in the community The adolescent at school. The adolescent personality Juvenile delinquency Social development and expansion—heterosexuality Part IV The guidance of adolescents. The hygiene of adolescence. Guidance and control. Educational needs of the adolescent. Vocational choice and adjustment The adolescent and a democratic society Appendices Selected bibliography—reference Annotated bibliography—popular Vineland social maturity scale Index.

Note. (3193) A college text which deals with problems that are of special significance to college students who are still in the latter stages of adolescence, particularly problems of personality adjustment The book also introduces the student to basic experimental studies, thus laying the foundation for a critical appreciation of the current literature in the field. In this edition the subject matter has been rearranged and new material added on such topics as the needs of adolescents, development of attitudes, and heterosexuality Questions and reading references are again included in each chapter and the annotated bibliography has been brought up to date. The book may also be used as a guide for parents and teachers entrusted with the care of adolescents

GESELL ARNOLD

Studies in child development. New York Harper & Brothers 1948 234 p illus. 25 cm. $4.00 1489

Contents (abridged) Part One Methods of approach Charles Darwin and the study of child development A biological psychology The method of co-twin control. The conditioned reflex and the psychiatry of infancy The documentation of infant behavior in relation to cultural anthropology Cinemanalysis—a behavior research technique One-way-vision Part Two, Patterns of growth The predictiveness of infant behavior Some observations of developmental stability Early evidences of individuality Genius, giftedness and growth Part Three Clinical and social applications The changing status of the pre-school child. A guidance program for the handicapped pre-school child. A method of developmental diagnosis and supervision. The differential diagnosis of developmental defects. Developmental pediatrics: its task and possibilities. The cultural significance of a science of child development.

Note A collection of papers originally prepared by the author for various special occasions. As the titles indicate, they deal with the characteristics and conditions of child development in both its scientific and humanitarian aspects. Although of principal importance to child psychologists and pediatricians, the volume contains much of interest for enlightened parents also Selected references accompany some of the chapters. The author is widely known both for his writings in this field and for his work as Director of the Clinic of Child Development, School of Medicine, Yale University

GESELL ARNOLD, AND FRANCES L ILG

The child from five to ten New York Harper & Brothers 1946 475 p illus. 24 cm. $4 50 1490

Contents Part One Growth The cycle of development. The growing mind. The parent-child-teacher relationship. Part Two, The growing child The first four years. Five years old. Six years old. Seven years old. Eight years old. Nine years old. Ten. Part Three, The growth complex: Orientation. Motor characteristics. Personal hygiene. Emotional expression. Fears and dreams. Self and sex. Interpersonal relations. Play and pastimes. School life. Ethical sense. Philosophic outlook. A philosophic postscript. References and readings. Index.

Note This companion volume to the authors' *Infant and child in the culture of today* New York, Harper 1943 is written primarily for parents, teachers, physicians, and others responsible for the training of children. Based on an intensive study of more than fifty children, ranging in age from five to ten years, it presents an overall picture of their traits and growth patterns. Ten fields of behavior have been chosen within which the child is described or characterized, first from the standpoint of age and secondly from the standpoint of the behavior itself Although the method of approach is strictly clinical, the statistical data are interpreted in such a manner as to make work readily intelligible to non-specialists. A four-page bibliography is included.

HAMILTON, GORDON

Psychotherapy in child guidance. New York Columbia University Press 1947 340 p 22 cm. $4 00 1491

Contents Clinically oriented social casework. The diagnostic process in child guidance. The child who acts out his impulses. The anxious child. The severely disturbed child Direct treatment in the therapeutic process. The therapeutically conditioned environment. Treatment of young children. Treatment of the older child. Treatment of adolescents. Treatment of the family Preparation for psychotherapy in social work. Bibliography Index.

Note. For a number of years the Jewish Board of Guardians of New York has conducted a child guidance program in which social workers participate in the role of psychotherapists. This book is a study of the program from the standpoint of its soundness and general applicability Attempt is made to state in what way psychotherapy is related to social casework and to determine whether it may be practiced appropriately in a social work rather than medical setting.

HARMS ERNEST editor

Handbook of child guidance. New York Child Care Publications 1947 751 p. 24 cm. $8 60 1492

Contents (abridged) Part One, The development of child guidance in the United States, by B Glueck. Part Two, Guidance of the normal child Guidance of the nursery age child, by L. P Woodcock Guidance of the elementary school age by E. B. Wertz. Guidance in secondary schools, by C. E. Erickson. Guidance of the superior child and the prodigy by E. Harms. Part Three, Guidance of the physically handicapped child, by Harold W McCormick and L. C. Duryea. Part Four Guidance of the problem and subnormal child First section—the medical aspects of guidance of the problem and subnormal child. Second section—the methods of guidance of the problem and subnormal child. Part Five Training for child guidance The training of the medical man in child psychiatry by G. H J Pearson The training of the psychiatrist in child guidance by Leo Kanner The training of the social worker for child guidance, by C. Towle. Part Six, The social aspects of child guidance Parents and child guidance by J. K. Bentley City and rural guidance, by M. M. Chambers Sex guidance, by F McKinney Delinquency and guidance by J Paulson. Vocational guidance, by Franklin J. Keller Camping and guidance, by P S. DeQ Cabot.

The guidance problems of Negro youth, by C. S. Johnson. Special guidance problems with migrant children, by L. C. Wagoner Part Seven, Religious aspects of guidance. Part Eight, Special viewpoints for guidance Freud's psychoanalytic viewpoint for child guidance, by M. M. Schoenberger Alfred Adler' viewpoint on child guidance, by Alexandra Adler Index.

Note Including forty-odd papers by as many different authors, this volume constitutes comprehensive survey of the many phases of child guidance recognized by present-day specialists. With very few exceptions, the papers ar representative, primarily of points of few and are not outlines of procedural techniques; unfortunately the contributors are identified by name only with no indication of professional status. The volume should be of interest to many parents, although it will be of service primarily to such professional groups as educators, pediatricians, and all social and religious workers associated ith children. A list of selected references follows most of the chapters.

HATHAWAY, WINIFRED

Education and health of the partially seeing child. Revised edition. New York Published *for the National Society for the Prevention of Blindness, Inc.* by Columbia University Press, 1947 216 p illus. 23 cm. $2 50 1493

Contents (abridged) Part One, Historical background. Part Two, Administrative responsibilities: Classification of the partially seeing. Method of finding partially seeing children Administrative program planning. Problems in administrative program planning for small communities and rural areas. School health services for visually handicapped children. Selection and preparation of the teacher of the partially seeing. Supervision of partially seeing pupils. Methods of conducting and financing classes for the partially seeing. Preparing the school for the partially seeing child Part Three, Educational responsibilities: Teaching partially seeing children. The use of mechanical devices in teaching. Child guidance for partially seeing pupils. Part Four Community social service responsibilities: Community social service and civic organizations. The road ahead. Appendixes: What the teacher should know about the eye and eye hygiene. Vision testing, screening process Equipment for partially seeing pupils. Vocabulary of terms relating to the eye. Bibliography Index.

Note This work is handbook of procedure, primarily for educational administrators, teachers, and ophthalmologists interested in children with defective vision. Secondarily it is challenge to the public to make available the necessary facilities for specialized educational programs for such children. The broad administrative aspects of the problem are intelligently presented, without sentimentality and the actual details of daily procedure are described clearly and practically although the difficulties of the program are not minimized, especially for the small or rural school system. The revised edition includes some new supplementary and bibliographical material.

JERSILD, ARTHUR THOMAS

Child psychology Third edition. New York Prentice-Hall, Inc. 1947 623 p illus. 21 cm. $5 00 1494

Contents Beginnings of behavior Some general characteristics of development Some aspects of living and learning in infancy and early childhood Motor development. Development of social behavior. Feeling and emotion. Language development. The growth of understanding. Children's make-believe, dreams, and other imaginative activities. Children's ideals, morals, and religion Children's interests. The growth and prediction of intelligence. Personality and problems of adjustment. Author index. Subject index.

Note. (3167) An introductory textbook designed for college students and also for parents who are interested in the maturation problems confronting their children. The age groups dealt with range from infancy through early adolescence. In this edition the author has endeavored to more closely integrate the various aspects of the subject and to draw greater attention to the significance of child's overt behavior in relation to his thoughts and emotions. The plan of the book remains the same as in the second edition. The very extensive reference lists have been expanded to include recently published literature. The author is Professor of Psychology at Columbia University

KUGELMASS ISAAC NEWTON

Growing superior children. Revised edition. Illustrated. New York D Appleton-Century Company Incorporated, 1946 590 p illus. 21 cm. $5.00 1495

Contents Part I, Our newborns: Perfecting the newborn prenatally Evaluating the newly born baby Adjusting the newborn's physique. Feeding the newborn scientifically Conditioning the newborn habits. Part II, Our infants: Determining the baby's growth potentialities. Directing the baby's development. Feeding the baby for superior growth. Training the baby in health habits. Preventing babies' disturbances. Part III, Our children Individualizing the child's physical progress. Applying child nutrition for superior growth. *Promoting the child's mental development. Safeguarding* the child's emotional health. Cultivating the child's social behavior Part IV Our adolescents. Attaining adolescent physical maturity Enlarging adolescent mental outlook. Adjusting adolescent emotional balance Perfecting adolescent social behavior Personality in the making. Glossary Index.

Note. An inclusive book hich discusses the main problems encountered in the rearing of children. Unlike other books of the kind it is not limited to one age or period but covers infancy through adolescence. It is intended for direct use by parents; and therefore it is written in non-technical language. The author is an outstanding pediatrician. *His views as expressed in this work are* conservative but sound. *There is considerable emphasis upon the* psychological and also upon the nutritional aspects of rearing children. Many important revisions and amplifications have been made in preparing the original text for this edition.

LAWLER, EDMUND GRIFFIN

Baby care from birth to birthday Chicago Wilcox & Follett Co 1947 406 p illus. 22 cm. $2 75 1496

Contents (abridged) Section One, The baby' needs. Section Two, Feeding the baby: Breast feeding. Bottle feeding. Food elements every baby needs Section Three, Month-by-month development of the baby Section Four Care of the premature baby Section Five, Diseases and disorders: Congenital defects. Newborn or neonatal period. First six months of life. Second six months of life. Section Six, Contagious and infectious diseases. Section Seven, Emergency treatment and first aid. Index.

Note An elementary book for the use of mothers who are caring for their first infants. The text proper is clearly written and brief almost every operation described is also illustrated in reproduction of an actual photograph The author is prominent pediatrician.

LOUTTIT CHAUNCEY MCKINLEY

Clinical psychology of children s behavior problems. Revised edition. New York Harper & Brothers *1947 661 p illus. 21 cm. $4.50* 1497

Contents Part I, Methods Introduction. The nature of problem behavior Diagnostic methods: anamnesis and examination. Diagnostic methods: psychometrics. Treatment procedures. Part II, Problems correlated with abilities: Mental deficiency or feeblemindedness. School retardation Specific disabilities in school subjects. Superior mental ability Part III, Primary behavior problems: Conduct problems. Juvenile delinquency Speech defects. Personality problems. Part IV Problems correlated with organic disabilities: Sensory defects. *Neurological and physical disabilities.* Subject index. Name index.

Note (3170) The behavior problems encountered in clinical psychological work with children are discussed authoritatively and in considerable detail in this book. Diagnosis and treatment are dealt with from the standpoint of practical work in behavior clinics. Particular stress is laid upon the necessity for considering the patient as whole, with all his family neighborhood and school background, along with his physical condition. Case histories and statistical tables appear throughout the volume, and the chapters include fairly extensive bibliographies. In revising the work for this edition the author omitted certain material on disorders seldom encountered in young children, added brief history of clinical psychology and the chapter on the nature of problem behavior and made revisions in other parts in order to incorporate contributions published since 1934.

MERRILL MAUD AMANDA

Problems of child delinquency New York Houghton Mifflin Company 1947 403 p il *lus. 26 cm. $3.50* *1497a*

Contents. Problems of delinquent behavior. Understanding the delinquent. Social frames of reference. "Toward school with heavy looks. Personality and problems of adjustment. The intelligence of delinquents. Motivation. Private worlds. Interests and attitudes. Factors in after-treatment adjustment. Summary Bibliography Appendices. Index.

Note. This book is both report of careful socio-psychological study of group of delinquent children and general treatise on delinquency It is based on study of 300 children brought before California juvenile court during the years 1933–1935 and on similar study of group of non-delinquent children. It is intended primarily for psychology students, but the form of presentation and the readable style make it equally valuable to teachers, social workers, and others concerned with the problems of child delinquency Statistical data has been segregated in the appendices.

THE PSYCHOANALYTIC STUDY OF THE CHILD. New York International Universities Press, 1945–46 2 v 24 cm. $7.50 1498

Contents (abridged) Volume I, Genetic problems The genetic approach in psychoanalysis, by H. Hartmann and E. Kris. The biologic economy of birth, by P Greenacre. Examination of the Klein system of child psychology by E. Glover II, Problems of child analysis and child development. Indications for child analysis, by A. Freud. Clinical notes on child analysis, by B. Bornstein. Formation of the antisocial character by K. Friedlander III, Guidance work The use of dreams in psychiatric work with children by H. S. Lippman. A contribution to the education of parent, by M. Ruben. The reluctance to go to school, by E. Klein IV Problems of education The means of education by O. Fenichel. Psychoanalytic education, by W Hoffer Childhood and tradition in two American Indian tribes, by E. H. Erikson. The psychology of gang formation and the treatment of juvenile delinquents, by F Redl. VI, Surveys and comments. Volume II. I, Problems of child development The child' laughter by E. Jacobson The pre-oedipal phase in the development of the male child, by J Lampl de Groot. Hospitalism follow-up report, by René A. Spitz. II, Clinical problems The psychoanalytic study of infantile feeding disturbances, by A. Freud. Psychoanalytic contributions to the problem of reading disabilities, by P Blanchard Experience with enuretics, by A. Katan Diaries of adolescent schizophrenics (hebephrenics) by W Hoffer III, Guidance work Psychoanalytic orientation in child guidance work in Great Britain, by K Friedlander. IV Problems of education and sociology Ego development and historical change, by E H. Erikson Incentives to development and means of early education by L. E. Peller History of child psychiatry J. B. Felix Descuret, by R de Saussure

Note In this series, papers written by American and British specialists are collected for the benefit of advanced students and professional workers in child psychology The treatment is on professional level and the predominating viewpoint Freudian.

RAND WINIFRED AND OTHERS

Growth & development of the young child. By Winifred Rand, Mary E. Sweeny and E. Lee Vincent. Fourth edition illustrated. Philadelphia W B Saunders Company 1946 481 p. illus. 20 cm. $3 50 1499

Contents Current concepts of growth and development The home and family as background for growth Life begins. The child's physical equipment for growth and development The care and feeding of the growing child Intellectual growth The child grows and develops socially and emotionally General principles Patterns of personality development. Bibliography Index

Note (3335) An introductory and inclusive textbook for use in college courses. It suitable also for reading by parents. In the present edition has been so extensively rewritten that it is essentially new work in content although intended for the same audience. Rewriting was necessary because of numerous advances made in the field of child study since the third edition as prepared. Special note is made of the greatly expanded discussions of the intellectual, emotional, and social aspects of the development of young children.

SHIRLEY HALE FOREMAN

Psychiatry for the pediatrician New York The Commonwealth Fund 1948 442 p. 24 cm $4.50 1500

Contents Basic concepts in child guidance. Development and habit training. Physical factors and problems. Intellectual factors and problems. Emotional factors and problems. Sexual factors and problems. Environmental factors and problems. Investigation of behavior problems. Treatment of behavior problems. Mental health in changing world. Glossary Index.

Note This book discusses the common psychiatric problems of children that are likely to come to the attention of pediatricians and general practitioners, and outlines corrective techniques. It originated in lectures given to medical students at the Stanford University Medical School, and is intended for advanced students and practicing physicians, especially the latter A considerable part of the material is based on study of the first 1,000 cases seen in the pediatric clinic operated by Stanford University and known as the Stanford Pediatric-Psychiatric Unit. The author has made special effort to keep his presentation simple and free of issues that are still the subject of controversy among psychiatrists. Brief bibliographies ar appended to the chapters

SPOCK BENJAMIN

The common sense book of baby and child care, with illustrations by Dorothea Fox. New York Duell Sloan and Pearce 1946 527 p. illus. 20 cm. $3 00 1501

Contents (abridged) Preparing for the baby The right start. Breast feeding. Bottle feeding. Adding vitamins and water. Daily care. How the baby is doing Your baby's development. Changes in diet and schedule. Weaning from bottle to cup. Inoculations. Toilet training. The one-year-old. Elements in the diet. Foods and meals. Managing young children. The two-year-old There to six. From six to eleven. Schools. Puberty development. Problems of feeding and development. Illness. First aid. Special problems. Index.

Note. One of the most successful books ever published for the guidance of parents of infants and young children. It is especially outstanding for its correlation of practical directions with sound child (and parent) psychology and for the wide range of detailed information. The author is pediatrician now on the staff of the Rochester Minnesota, Child Health Project and the University of Minnesota.

STERN EDITH (MENDEL)

The housemother's guide in collaboration with Howard W Hopkirk. New York The Commonwealth Fund 1946 103 p. 19 cm. Paper $0 50 1502

Contents Foreword, by Howard W Hopkirk. In place of mother. A few words to housemothers. These are your children. Most of your children have families. When home has capital H. A child' first few days in the home. When behavior creates difficulties. The group has its advantages. Neatness can be overdone. It matters what they wear. Good habits and good health. When your children work. When your children play About matters of sex. Your children must live in the world. Your children's religion. A child's last few days in the home About you and your job.

Note A practical, clearly-written manual for workers in children's institutions, including boarding schools and camps. It deals realistically and skillfully with the numerous problems encountered in guiding school-age children to become useful, well-adjusted citizens. The collaborating author is Executive Director of the Child Welfare League of America.

TEAGARDEN FLORENCE MABEL

Child psychology for professional workers. Revised edition New York Prentice-Hall, Inc. 1946 613 p illus 24 cm. $5 00 1503

Contents. Heredity The principles of heredity as applied to the case load. Getting the child into the world. Infancy The preschool child Some fundamental physical habits. The child and his home. The child away from his own home. Adoption. The child's emotions. The sex life f the child. The child' intelligence. The child and his school Behavior difficulties Psychological and social problems incident to certain diseases of children. Children with visual and auditory handicaps Speech defective and crippled children. The children's charter Index.

Note (3181) Although designed primarily for professional social workers, this volume has value as college text. In addition to purely psychological problems, the effects of heredity environment, and disease on the child's conduct and personality are considered. This edition has been enlarged by the inclusion of new illustrative material based on the author's clinical experience and the extensive chapter bibliographies have been augmented by nearly 700 references published since 1940.

TERMAN LEWIS MADISON, AND OTHERS

Genetic studies of genius Volume IV The gifted child grows up twenty-five years' follow-up of a superior group by L. M Terman M H Oden, *in association with N Bayley*, H. Marshall Q McNemar and E. B Sullivan Stanford, Calif Stanford University Press, 1947 448 p. illus. 23 cm. $6 00 1503a

Contents. Inception and nature of the research. Composition and social origin of the gifted group. Characteristic traits of the gifted child—physique health, and educational achievement—interests and preoccupations—character tests and trait ratings. Six years later—The promise of youth. Later follow-up—1936, 1940 and 1945. Mortality General health and physique. Mental health, nervous disorders, and general adjustment. Intelligence tests of 1940. Intellectual status of the gifted subjects as adults, by Q. McNemar Educational histories. Occupational status and earned income. Vocational interest tests. Avocational and other interests. Political and social attitudes. Marriage, divorce, marital selection, and offspring. Marital adjustment. The problem of school acceleration. Subjects of IQ 170 or above Subjects of Jewish descent. Factors in the achievement of gifted men. War records. Appraisal of achievement Looking backward and forward. References cited. Additional selected readings. Appendix. Index.

Note This fourth study in the famous series of Stanford studies of group of gifted children should lay to rest conclusively the time-worn notion of the ultimate failure of the child prodigy Easily the most valuable report in the series to date the book presents the early adult achievements of ninety-seven percent of the 1,300 gifted children originally selected in 1921 for testing and observation. Following the introductory chapters on previous research in the project the results of 1940 report (briefly re-checked in 1945) on the subjects are presented clearly and completely and in every area of personal and professional life the average of attainment of the subjects far excels that of the "average man. Beyond the value of the primary theme, the comprehensive research and statistical analyses should prove of considerable value to psychologists, sociologists, educators, and parents, particularly Facsimiles of the 1936, 1940, and 1945 questionnaires are included in forty-page appendix.

UNITED STATES CHILDREN'S BUREAU

Your child from one to six. Washington D C. Government Printing Office, 1945 147 p. illus. 23 cm. (United States Children s Bureau. Publication 30 Rev 1945) Paper $0 15 1504

Contents Out of babyhood into childhood. Growth and development. Preserving health. Daily routines Food Clothing. The home. How children learn. Learning to eat. Bowel and bladder control. Learning good sleep habits. Learning to keep clean Learning to dress. Learning emotional control Learning affection and love. *Growth of personality* Helps to good behavior The value of play Thumb sucking. Nail biting. Stuttering. Children questions. Imagination and honesty How families are different Teeth. Prevention of accidents Prevention of disease The sick child. Accidents. Table of communicable diseases Index

Note (1331) A "best seller" among U S G P O. titles, this pamphlet is the new edition of publication first issued in 918 and rewritten in 1931 The 1945 edition has been completely rewritten to bring it into accord with recent thought on various aspects of the care and development of young children According to the foreword, it was written by Marion L. Faegre and Caroline A. Chandler, with Marjorie Heseltine contributing the material on food and nutrition

WARE, E LOUISE

Mental hygiene of the orthopedically handicapped child. New York Association for the Aid of Crippled Children, 1947 16 p 23 cm. (Mental hygiene series. Pamphlet 1) Paper $0 25 1505

Note A brief but authoritative and useful discussion of this special aspect of orthopedics It is suitable for both parents and those who are concerned with the care of handicapped children.

WITMER, HELEN LELAND editor

Pediatrics and the emotional needs of the child as discussed by pediatricians and psychiatrists at Hershey Pennsylvania, March 6–8 1947 New York The Commonwealth Fund, 1948 180 p illus. 23 cm. Paper $1.50 1506

Contents: *Session* I, What have we learned about emotional growth and development? *Session* II, What can the pediatrician in practice do in the field of mental health? *Session* III, What are pediatric departments now thinking and doing about problems of mental health? *Session* IV What are the next steps in pediatric teaching and training toward better understanding of the emotional life of the child? *Session* What are the next steps in furthering comprehensive pediatric service? *Session* VI, Summary of the discussion. Appendix Ten hospital reports

Note. The proceedings of meeting of pediatricians, psychiatrists, and social workers called to discuss the psychological problems encountered in pediatric practice, and ways of integrating the practice of this branch of medicine ith the relevant findings of psychiatry The arrangement of the volume follows the sequence of the agenda. The original papers read at the session are printed without abridgment; the ensuing discussions are often abridged or summarized. The appendix contains reports from ten hospitals on their arrangements for aiding the pediatrician he has to deal with emotional difficulties of the growing child.

PSYCHOLOGICAL TESTING

ABRAMSON, HAROLD ALEXANDER, AND OTHERS

Non-projective personality tests New York The New York Academy of Sciences, 1946 148 p. illus. 23 cm. (New York Academy of Sciences Annals. Vol. 46 p 531–678 1946) Paper $1 75 1507

Contents Part I, Personality inventories The effect of alcohol on the personality inventory by H. A. Abramson. Psychological screening procedures in the War Shipping Administration, by G. G. Killinger and J. Zubin. Part II, The Cornell indices and the Cornell word form Construction and standardization, by B. Mittelmann and K. Brodman. Results, by A Weider and D Wechsler Application, by H. G Wolff. The Cornell selectee index—an aid in psychiatric diagnosis, by H J. Harris. Part III, Ability patterns and personality The expression of personality and maladjustment in intelligence test results, by R. Schafer. Personality and diagnostic evaluation by means of non-projective techniques, by E. Windowsky Difference between cases giving valid and invalid personality inventory responses, by Z. A Piotrowski. Part IV Theory Principles underlying non-projective tests of personality by D. Rapaport. Problems of performance analysis in the study of personality by M Scheerer

Note The papers comprising this volume were presented at conference held in March, 1945 Various types of non-projective intelligence tests employed in personality determination are described and evaluated. The discussion includes tests devised for use in selecting military trainees for the United States Army and American Merchant Marine during World War II. Ther no index.

ADKINS DOROTHY C

Construction and analysis of achievement tests the development of written and performance tests of achievement for predicting job performance of public personnel with the assistance of Ernest S Primoff and Harold L. McAdoo and Claude F Bridges and Bertram Forer Washington D C. Government Printing Office, 1947 292 p illus. 23 cm. Paper $1.25 1508

Contents Planning written test. Constructing and compiling written tests. Basic statistical tools. Analysis of test results. Special problems in the development of performance tests. Appendix Glossary of technical terms used in statistical analysis of test results Author index. Subject index.

Note. The material presented in this volume was prepared originally for the training of those members of the United States Civil Service Commission and War Department who are responsible for devising performance and achievement tests. However, the discussions of the basic principles, theory and methods of constructing, applying, and interpreting such tests will be of value in industry and other fields where the prediction of job performance and selection of personnel are vital factors. Although elementary statistical concepts and techniques involved in this type of work are discussed at some length, readers of the book should have a background knowledge of statistical methods. Chapter bibliographies are included.

BECK SAMUEL JACOB

Rorschach's test foreword by Roy R. Grinker Volume II A variety of personality pictures New York Grune & Stratton 1945 402 p 23 cm. $5 00 1509

Contents Part I Concerning personality Psychologic significance of the Rorschach test factors. Part II The intelligence curve. The adolescent years. Schizophrenic solutions. Neurotic struggles. Before and after—the test repeated in the same persons. Bibliography Index.

Note: (7030) The first volume of this set was published in 1944 and was devoted to a description of the procedures of interpreting and evaluating responses to the Rorschach test. The present volume presents the records and provides detailed interpretations of tests made of forty-three persons who represented wide divergencies in both behavior patterns and intelligence. The work is intended for professional workers in psychology and psychiatry

BENNETT GEORGE K AND OTHERS

Differential aptitude tests, by George K. Bennett, Harold G Seashore and Alexander G Wesman New York The Psychological Corporation 1947 Various paging 29 cm. $2.50 complete specimen set and manual. 1510

Contents (abridged) Section A, An integrated battery of guidance tests The trend in aptitude testing Principles governing the test construction. Descriptions of eight tests Section B Administration and scoring Suggestions for scheduling testing programs. General considerations for administration Steps in administering the tests Scoring procedure. Section C, Statistical information Intercorrelation of the tests Principles of differential measurement. Section D Norms Section E, Interpretation of the tests The validity of the differential aptitude tests. Tests in counseling and administration. A general guide to the interpretation of the tests. The interpretation of individual profiles. Some case reports.

Note A looseleaf manual of comment and discussion covering the Psychological Corporation's seven basic tests for measuring aptitudes of school children The tests described include those for verbal reasoning, numerical ability abstract reasoning, space relations, mechanical reasoning, clerical speed and accuracy language usage—spelling and sentences. The book is published for the information and guidance of school administrators, vocational counselors, and test psychologists

BOCHNER RUTH AND FLORENCE HALPERN

The clinical application of the Rorschach test. Second edition revised and enlarged. New York Grune & Stratton 1945 331 p. illus 22 cm. $4 50 1511

Contents Test procedure. How to score Record Column 1 Area or location Column 2 Determinants of the response Column 3 Content of the response. Additional test factors Intelligence. The cards Interpretation Normal adult records. Children records. The mental defective The neurotic Behavior problems The schizophrenic. The organic The alcoholic. Bibliography Index. Table of reciprocals.

Note (1933) A reference manual of procedure in using the Rorschach test and in interpreting the results of individual responses to the test cards In the present edition the number of case histories has been considerably extended, and the case history material now fills 212 of the book's pages. The bibliography has been revised to include literature published through about the end of 1944

CRAWFORD, ALBERT BEECHER, AND PAUL S BURNHAM

Forecasting college achievement a survey of aptitude tests for higher education Part I, General considerations in the measurement of academic promise. New Haven, Conn. Yale University Press 1946 291 p illus. 24 cm. $3 75 1512

Contents: Background of educational measurements. The measurement of educational performance and basic statistical principles. Differential aptitude and general intelligence tests. Achievement testing. A sample aptitude battery Unitary traits and primary abilities. Test construction and the measurement of "allegiance" Appendixes: Practice booklet (Yale battery) Tables supplementary to the data of Chapters and VI. References and author index. General index.

Note A detailed study on the professional level of the nature and reliability of various types of aptitude tests designed to forecast "individuals' relative promise for differential types of study and of experience with them. Some comparison with the written essay type of examination is included. The work is related but bears little resemblance to a manual of educational aptitude tests prepared by the senior author for the American Council on Education and issued in preliminary form in 1942 The present volume deals with general topics and specifically with guidance tests used in high schools and during the first college year Also it discusses selected aspects of College Entrance Examination Board tests. Two volumes scheduled for publication will consider tests for measuring the abilities of college undergraduates and of graduate students. Both authors are associated with the Student Appointment Bureau of Yale University

FORD MARY

The application of the Rorschach test to young children. Minneapolis, Minn The University of Minnesota Press, 1946 114 p. illus. 23 cm. (University of Minnesota. The Institute of Child Welfare. Monograph series. No XXIII) $2 00 1513

Contents Introduction Review of the literature. The problem. Procedure. Scoring and interpretation. The subjects. The use of the Rorschach test with young children. Means of the Rorschach test determinants Sex differences in test determinants. Reliabilities of the test determinants. Validity of the determinants of intelligence. Validity of some of the determinants of personality Summary and conclusions. Appendices. Glossary Bibliography Index

Note An analysis for child psychologists of the responses obtained from 123 boys and girls, ages three to eight, to the Rorschach tablets. Up to the present time very little Rorschach testing of this age group has been accomplished, due to the lack of standards for correctly interpreting results. The present book is a useful contribution towards the establishment of these standards.

HILDRETH GERTRUDE HOWELL

A bibliography of mental tests and rating scales 1945 supplement. New York The Psychological Corporation 1946 86 p 23 cm. Paper $1 75 1514

Contents Binet tests and revisions. Mental tests and rating scales for infants, nursery school and kindergarten children—behavior and development inventories. Mental ability and scholastic aptitude tests for elementary school children (ages approximately 6–14) Mental ability and scholastic aptitude tests for high school students (ages approximately 14–18) Mental ability and scholastic aptitude tests, college and adult levels. Mental ability and aptitude tests, general and unclassified. Professional aptitude tests. Teaching aptitude tests. Tests for subnormal cases, psychotics and mental deterioration Tests for sensory defects Separate tests of specific mental abilities. Performance tests, formboards and mazes. Psychomotor tests and apparatus. Achievement and educational tests *Fine arts.* Character and personality tests and ratings. Vocational tests. Environment ratings. Unclassified material. Military Subject index. Author index.

Note More than 1,000 additional test items ranging in date of publication from the year 1879 to October 1 1945 have been compiled and are included in this supplement to the author's *A bibliography of mental tests and rating scales,* second edition, *New York,*

1939 295 p. The classification scheme remains the same as previously and no attempt is made to annotate or evaluate the entries. The aim of the work as a whole is to provide psychologists and educators with a comprehensive rather than a selective listing of tests. The complete work including the supplement now lists and gives the authors and publishers of 5,279 tests.

KABACK, GOLDIE RUTH

Vocational personalities an application of the Rorschach group method. New York Bureau of Publications Teachers College, Columbia University 1946 116 p illus. 23 cm. (Teachers College Columbia University Contributions to education. No 924) $2 10 1515

Contents Introduction methods frequently used to investigate personality. The problem. Rorschach investigations and procedures used in this study. The subjects of this study. Analysis of the responses. The relationships between Rorschach components. Summary and conclusions. Bibliography. Appendices.

Note: Rorschach practitioners in the United States have widely urged the adoption of the Rorschach technique for vocational guidance and vocational selection, contending that work habits and personality can be determined from Rorschach records and therefore that the Rorschach test can be of considerable help in selecting persons for positions requiring certain personality traits and in guiding students with respect to educational training and vocational preparation. The study reported in this book was undertaken to investigate the validity of these claims. Sixteen groups totaling 454 individuals were tested with the Rorschach group method, from which 300 records were used in this study: 75 pharmacists, 75 accountants, 75 pharmacy students, 75 accountancy students; 154 non-representative records were not included. The responses are recorded in detail for these groups and conclusions are drawn from the results.

MAURER, KATHARINE (MATHER)

Intellectual status at maturity as a criterion for selecting items in preschool tests. Minneapolis The University of Minnesota Press, 1946 166 p illus 23 cm. (University of Minnesota. The Institute of Child Welfare. Monograph series no XXI) $2.50 1516

Contents: Introduction. The problem. The subjects of the terminal status study. Collection and analysis of the data. Validation. Discussion of the results. Interpretation. Bibliography. Appendices: Interests questionnaire. Directions for administering the Minnesota preschool scale, forms A and B. Graphs showing the percentage of subjects (N = 180) passing each item of the Minnesota preschool scale, forms A and B, at each of nine age levels. Indexes.

Note: A study intended to aid psychologists in preparing tests for predicting the future psychological development of children. It is based mainly on measurements made with the Wells revision of the Army Alpha test of 218 young men and women between the ages of sixteen-and-a-half and twenty-two years, all of whom had been tested before the age of six with the Minnesota pre-school scales. Analysis of results from the army test conclusively showed that only about one half of the items found in the usual type of children's predictive test have any significance for long range prediction of the child's probable development. Much of the information is given in tabular or graphical form.

MURSELL, JAMES LOCKHART

Psychological testing New York Longmans, Green and Co., 1947 449 p. illus. 21 cm. $4 00 1517

Contents The general characteristics of mental tests. Psychological tests as instruments of measurement. The concept of general intelligence. Scales for the measurement of intelligence. Group tests of intelligence. Tests for extreme ages—infants and adults. Aptitude testing. Tests of personality interest, attitude, and character. Applications of mental tests and their implications for testing. Wider psychological aspects of mental testing. The evolution and improvement of mental testing. Bibliography References in the text other than to tests. Bibliography Tests discussed in the text. Topical index. Index of references in the text.

Note. In this work for psychologists and advanced students of psychology basic theories and the past, present, and future status of psychological testing are discussed. Approximately one hundred contemporary mental measuring tests are critically examined and evaluated. The volume contains fifty-six tables of psychometric data, and in addition to chapter references the bibliographies list approximately 600 entries. Chapter discussion questions are included. A working knowledge of the principles of mathematical statistics is prerequisite. A new edition was scheduled for publication in 1949.

RAPAPORT DAVID, AND OTHERS

Diagnostic psychological testing the theory statistical evaluation and diagnostic application of a battery of tests. Volumes I and II. Chicago The Year Book Publishers, Inc. 1945 Illus. 23 cm. (The Menninger Clinic monograph series. No 3) $7.50 each complete set, $14.00 1518

Contents: Volume I Part one Introduction. Part two, Diagnostic intelligence testing: The nature of intelligence. The Bellevue scale. The Babcock test. Part three, Diagnostic testing of concept formation: Introduction to the testing of concept formation. Verbal concept formation. The sorting test. The Hanfmann-Kasanin test. Patterns of achievement on the three concept formation tests. Bibliography Appendices: Vital data of our clinical and control population. Tables—Group averages and individual scores. Review of literature, by Martin Mayman. Indexes. Volume II. Part four Diagnostic testing of personality and ideational content: Introduction. The word association test. The Rorschach test. The thematic apperception test. Diagnosing with a battery of tests. Appendices: Tabulation of the Rorschach scores of each subject of our research population. Extracts of deviant verbalizations on the Rorschach test. Review of the literature on the tests treated in this volume. Indexes.

Note: A detailed study based on the clinical investigations of the authors, of the techniques and results of using in psychiatric diagnosis a battery of seven tests: The Wechsler-Bellevue intelligence scale, the Babcock test, the Sorting test, the Hanfmann-Kasanin test, the Word association test, the Rorschach test, and the Thematic apperception test. Each test is described, the psychological rationale of the function underlying achievement on the test is explained, administration of the test in the clinic is discussed, then the results are presented chiefly in the form of statistical data. The work is intended for professional psychiatrists.

SCHAFER, ROY

The clinical application of psychological tests diagnostic summaries and case studies. Foreword by David Rapaport, The Menninger Foundation. New York International Universities Press, Inc. 1948 346 p 24 cm. (The Menninger Foundation monograph series. No 6) $6 75 1519

Contents: Foreword, by David Rapaport. General considerations. Diagnostic summaries. Case studies. Border case studies. Concluding remarks. Scoring symbols for the Rorschach test. Index.

Note: This work is designed as a supplement, or sequel, to *Diagnostic psychological testing*, written by the author in collaboration with D Rapaport and M. Gill, and described above. It supplies extended diagnostic summaries and numerous studies of individual cases in which batteries of tests were used, following the methods described in the earlier work.

STEIN MORRIS ISAAC

The thematic apperception test an introductory manual for its clinical use with adult males. With a foreword by James G Miller Cambridge Mass. Addison Wesley Press, Inc., 1948 91 p 24 cm. $2 50 1520

Contents. The TAT pictures and their common stories. Administration of the TAT Technique of clinical analysis of the TAT Additional factors to be studied. The technique of interpretation. Analysis and interpretation of a clinical protocol.

Note: A manual for students of psychology who have had some training in personality analysis and are familiar with clinical practice. To facilitate application of the test, the author has worked out a technique of analysis which avoids the difficulties of the original "need press" system and terminology. Proceeding systematically from the description of the test and the most common responses through a discussion of the clinical analysis and interpretation to a schematic presentation of the factors involved, the author concludes his course with an example of a complete case protocol.

STUIT, DEWEY BERNARD editor

Personnel research and test development in the Bureau of Naval Personnel by the staff Test and Research Section in cooperation with N.D.R.C project N 106 and the College Entrance Examination Board. Princeton N J Princeton University Press 1947 513 p illus. 24 cm. $7.50 1521

Contents (abridged) Part I, The Navy's selection, classification and training programs: Personnel research and test development in the Bureau of Naval Personnel—history and scope of the program, by R. N Faulkner and Helen R. Haggerty Selection and classification of officer personnel, by J H. Cornehlsen. Selection and classification of enlisted personnel, by C. E. Odell. The program for training officer personnel, by E. D Carstater The program for training enlisted personnel, by H. T Batchelder Part II, The construction, standardization, and use of selection and classification tests. Part III Prediction of success in training. Part IV The construction and use of achievement measures: Services provided to navy training through achievement examinations, by D G. Ryans. Achievement examinations for elementary enlisted schools, by R. B. Porter and C. M. Harsh. Achievement examinations for officer schools, by E D. Carstater The measurement of achievement in the radio technician training program, by D. D Feder and W R. Lawrence. Advancement in rating examinations, by R. M. Cruikshank and W C. Darling. Part Follow-up studies of training and classification techniques: Problems in establishing criterion measures, by H. P Bechtoldt. Prediction of performance of enlisted personnel aboard ship, by H. P Bechtoldt, J W Mauchar and D B. Stuit. Information surveys as evaluative devices, by C. Robert Pace. Problems for further study by N Frederiksen, E. D Carstater and D. B. Stuit. Appendices: Lists of personnel. List of selection and classification tests, advancement examinations, achievement examinations, and technical personnel aids developed or approved for official use by the Test and Research Section. Lists of research studies Sample test materials. Technical appendix. Index.

Note During World War II the United States Navy rapidly enlarged its ranks by drawing officers and men directly from civilian life. Modern methods of aptitude testing were extensively used in placing the new personnel in positions for which they were suited and where they could best serve the Navy's interest. The aims, methods, and experience of this testing program are described in detail and evaluated in this work. The authors of the twenty-two chapters and the editor were all members of the Test and Research Section of the Bureau of Naval Personnel, but the book is not an official publication of the Navy

THURSTONE LOUIS LEON

Multiple-factor analysis a development and expansion of *The vectors of mind* Chicago Ill The University of Chicago Press 1947 535 p. illus. 23 cm. $7 50 1522

Contents: Mathematical introduction The factor problem Fundamental equations Geometrical models. A factor problem in two dimensions. The grouping method of factoring Factors as explanatory concepts. The spherical model. The centroid method of factoring. Configurations and factor patterns. Rotation of axes. The method of extended vectors. The special case of unit rank The unknown communalities. The simple-structure concept. Oblique structure. Factorial invariance. Alternative methods of rotation. Second-order factors. The effects of selection. The principal axes. The appraisal of individual abilities. Index.

Note: (3114a) The concepts and techniques of multiple-factor analysis which were explained and demonstrated in the author's *The vectors of mind*, Chicago, 1935, are the subject of this successor to the 1935 work A much fuller exposition is now presented, some of the criticisms made of the original work are answered, new material is presented on many topics that were not fully developed before, and new simpler factorial methods are explained. The book represents ten years additional work and is approximately twice as long

TOMKINS SILVAN SOLOMON

The thematic apperception test the theory and technique of interpretation with the collaboration of Elizabeth J Tomkins. New York Grune & Stratton 1947 297 p. 23 cm. $5.00 1523

Contents History and development of the thematic apperception test. The technique of administration. The scoring scheme. Introduction to the technique of interpretation. Level analysis. Diagnosis of personality—the region of the family Diagnosis of personality—the region of love sex, and marital relationships. Diagnosis of personality—the region of social relationships. Diagnosis of personality—work and vocational setting. Diagnosis and psychotherapy References. Index.

Note This comparatively new (since 1935) method of psychiatric diagnosis—by interpretation of the individual's response to set of story" pictures—is here considered by psychologist who has worked closely with the test during most of its existence. Supposedly designed for the uninitiated as well as the professional psychologist, the work none the less presumes at least basic understanding of psychiatric procedure on the part of the reader. Although the first three chapters are f an explanatory nature, the remainder is devoted largely to interpretation and diagnosis. Detailed records of individual reactions to the pictures are followed by the author's evaluation f them and in many cases by corroborative diagnoses from other tests.

TRAXLER, ARTHUR EDWIN

Techniques of guidance tests records, and counseling in a guidance program. New York Harper & Brothers 1945 394 p illus. 24 cm. (Education for living series H H Remmers, editor) $4 50 1524

Contents (abridged) Background and orientation. Kinds of information needed, use of interviews and questionnaires in collecting information. Appraisal of aptitudes for guidance purposes Evaluation of achievement in guidance program. Appraisal of personal qualities—tests, rating scales, anecdotal records, and behavior descriptions. Planning and administering testing program for guidance purposes. Use of results of objective tests in improving the instructional and counseling program of the school. Cumulative records in guidance program. Case study procedures in guidance. The role of the teacher in guidance. Guidance in the adjustment of individuals. Reading sources for counselors. Index.

Note The subject f this book is the whole field of individual counseling and guidance in connection with organized education, particularly secondary- and vocational-school education, subject which is outside the scope f this bibliography However this book is included here because f the information it provides on psychological tests. A wide range of available psychological tests designed for the determination and rating of aptitudes, educational achievement, and personality characteristics is listed with years of publication names of publisher, and prices; and each test is described in considerable detail. The administration of tests of this type and the interpretation of their results ar discussed fully

TYLER, LEONA ELIZABETH

The psychology of human differences. New York D Appleton-Century Company Inc., 1947 420 p illus 22 cm. (The Century psychology series Richard M Elliott, editor) $3 75 1525

Contents Part I, The field of differential psychology Development of the basic philosophy Nature and extent of measurable differences Part II, The major group differences Methods and logic Differences between men and women. Race and nationality differences. Class differences Age differences. The feeble-minded. The genius Part III, Factors related to individual differences. Logic and statistical concepts The relationship of mental to physical characteristics. The effect of practice The contributions of hereditary and environmental factors to individual differences. Part IV, The appraisal of the individual The measurement of aptitudes. The search for basic traits. Differential psychology—a backward and forward look. Index.

Note An introduction to the psychology of variability among individual human beings, and among various groups selected as to sex, age, etc. It is designed primarily for college students majoring in psychology; but is useful also to social and personnel workers, executives, and lay readers with an interest in psychology Most of the subdivisions of the subject are approached through an historical survey of research on the specific problem. Methods of obtaining information are then described and illustrated with examples and graphs A very important part is the discussion of the validity of the various testing methods and the critical evaluation of their results. The author's conclusions are summarized at the end of each chapter Selected bibliographies are included with the individual chapters.

UNITED STATES. OFFICE OF STRATEGIC SERVICES

Assessment of men selection of personnel for the Office of Strategic Services. New York Rinehart & Company Inc., 1948 541 p illus 24 cm. $5.00 1526

Contents. The nature of the task. Principles of assessment. Assessment at S Procedures—Formulations and ratings—Analysis of variables. Assessment at W WS, and F Assessment overseas. The evaluation of assessment. Conclusions and recommendations. Appendices Assessment populations The interrelationships among the variables Intercorrelational matrices. Index.

Note A detailed, critical review of the methods developed and employed by the assessment units of the United States Office of Strategic Services in screening candidates for difficult and often hazardous assignments during World War II. The problems of assessing the abilities of men under these conditions are discussed rather fully The tests which were devised to ascertain the mental, emotional, and physical qualities of the candidates are described in detail. Some comparisons between the predictions made on the basis of the assessment procedure and the achievements of the men on their assignments are made. The book is of special interest to psychologists and psychiatrists interested in the study and measurement of personality

APPLIED PSYCHOLOGY

BORING EDWIN GARRIGUES

Psychology for the armed services. Prepared by a committee of the National Research Council, with the collaboration of many specialists. Washington The Infantry Journal, 1945 533 p illus. 21 cm. $4 00 1527

Contents: The use of psychology in war The eye as military instrument. Visual adaptation and night vision. Color and camouflage. The ear as military instrument. Smell in war Equilibrium and bodily orientation. Topographical orientation. Efficiency and fatigue. Physical conditions of efficiency Selection of men. Learning. Army teaching Motivation and morale. Personal adjustment. Emotion. Sex. Leadership. Rumor Panic and mobs. Assessing opinion and discovering facts. Propaganda and psychological warfare. Differences among the peoples of the world The use of psychology in war Index.

Note: A clearly written presentation of principles and facts of psychology which are of interest in the organization and leadership of armies. The range of topics is even wider than the table of contents indicates. Minor but important topics, such as the physiological effects of alcohol, are included. The discussion of each topic is concise and to the point The book is intended for readers and students of college level and higher; and is particularly suited to courses in professional military colleges and courses organized for the benefit of military officers

BRAY CHARLES WILLIAM

Psychology and military proficiency, a history of the Applied Psychology Panel of the National Defense Research Committee. Princeton N J Princeton University Press, 1948. 242 p illus. 22 cm. $3.50 1528

Contents: Foreword, by L. P Smith. The formation of the Applied Psychology Panel. The administration of the research program. Research on classification. The selection and training of specialists. The selection and training of communications and radar personnel. Classification, training, and equipment in the control of gunfire. Experimental methods and results in the control of gunfire Achievement and proficiency tests. The future of military psychology Index

Note This is essentially war report on the value of an integrated program of psychological direction in the two areas of classification and training of military personnel Organized through the National Research Council and manned largely by civilian psychologists, the Applied Psychology Panel conducted some twenty research projects in the two fields assigned. These projects are analyzed and evaluated in some detail, and although the weaknesses of the research are indicated, the program as whole is shown to be eminently successful. The contents of the study will be of concern chiefly to psychologists and military planners; the book also should be of value to much wider group of business and industrial executives concerned with personnel administration. There are numerous tables and diagrams and references to individual and group reports submitted by various members of the panel.

BURTT, HAROLD ERNEST

Applied psychology New York Prentice-Hall, Inc., 1948 821 p illus 23 cm. $7.35 1529

Contents (abridged) Some psychological fundamentals. Educational significance of differences in intelligence. Personal efficiency Vocational guidance. Psychology in general medical practice. Nature and diagnosis of mental disorders. Psychotherapy Psychology of testimony Psychological techniques for crime detection. Psychological factors in crime Psychological tests in employment. Efficiency in industrial work. Fatigue, monotony and accidents. Morale. Methodology and selecting of advertising appeals. Advertising media. Outlying fields Appendix. Index.

Note. The principles and some of the techniques of applied psychology are surveyed in this book, which is addressed primarily to college students of psychology and secondarily to laymen, such as business men, who desire more than superficial popularization. There are no exercises or problems, and no bibliography other than occasional footnotes. The author is Professor of Psychology at Ohio State University

GRAY, JOHN STANLEY

Psychology in human affairs, by J Stanley Gray with the assistance of eleven contributors. New York McGraw Hill Book Company Inc., 1946 646 p. illus. 24 cm. (Mc Graw Hill publications in psychology) $4.00 1530

Contents: Introduction. Psychology in college life. Psychology in child development. Psychology in education. Psychology in vocational guidance. Psychology in human adjustments. Psychological effects of nutrition, drugs, alcohol, and tobacco, by Ernest T. Wheeler Psychology in mental illness, by Paul A. Brown. Psychology in speech correction Psychology in public opinion and propaganda, by Ross Stagner Psychology in crime, by David B. Rogers. Psychology in music, art, and leisure, by Genevieve Berglund-Gray Psychology in industry employment, by Stanley K. Seashore. Psychology in industry training and merit rating, by Stanley K. Seashore. Psychology in work and efficiency by Alfred G. Dietze. Psychology in business, by Martha Ann Blesser Psychology in military affairs, by George L. Fahey and Murray M. Mintz. Psychology in clinical practice, by Carroll A. Whitmer Index.

Note: A textbook for introductory college courses in applied psychology Despite the title, the book is not intended for reading outside of organized courses conducted under competent instructor Practical aspects of psychology are emphasized, and each chapter is in effect compact interpretative summary with references to original sources, of selected papers and reports that bear on its specific topic.

KESSLER, HENRY HOWARD

Rehabilitation of the physically handicapped. New York Columbia University Press, 1947 274 p. 23 cm. $3.50 1531

Contents (abridged) Part I, Problems of the physically handicapped General considerations. The crippled child. The injured worker. The disabled veteran. The chronic disabled. Part II, Principles of rehabilitation Physical restoration. Rehabilitation centers. Vocational guidance. Selective placement. Part III, Rehabilitation in practice The mentally and emotionally disabled. The orthopedic patient. The blind and the deaf Part IV A national program: A national challenge. Bibliography Index.

Note: Training in both medical and social science and considerable experience as rehabilitation administrator enable the author to present here an excellent survey of the problems confronting the physically handicapped in the contemporary social and economic spheres. The major premise taken is that the physically handicapped individual is not necessarily inferior in productive capacity; his need is nothing more than intelligently directed therapy,—medical, mentally and social, invariably Roles played by private agencies, by workmen's compensation bureaus and by the U S. Veterans Administration are discussed to point the need of comprehensive governmental program for the physically disabled. Exposition

throughout the book is accompanied by informal accounts of case histories, so that the work is suitable for the lay as well as the professional reader The bibliography is full and noticeably contemporaneous.

LINEBARGER, PAUL MYRON ANTHONY

Psychological warfare. Washington Infantry Journal Press, 1948 259 p illus 24 cm. $3 50 1532

Contents (abridged) Part One, Definition and history: Historic examples of psychological warfare. The function of psychological warfare. The limitations of psychological warfare. Psychological warfare in World War Psychological warfare in World War II. Part Two, Analysis, intelligence, and estimate of the situation. Part Three, Planning and operations: Organization for psychological warfare. Operations for civilians. Operations against troops. Psychological readiness and disarmament. Index.

Note. An expert study of propaganda and other psychological techniques which can be employed to influence enemy morale and weaken resistance. Theoretical principles which underlie this type of warfare are discussed, but the emphasis is on practical applications. Leaflets and other forms of propaganda used by both sides in World War are illustrated and critically analyzed. Techniques of distribution are described. Major Linebarger had an extensive experience in psychological warfare in the eastern theatre of operations during World War II.

EDUCATIONAL PSYCHOLOGY

DAVIS ROBERT ALEXANDER

Educational psychology New York McGraw Hill Book Company Inc., 1948 349 p illus. 24 cm. (McGraw Hill series in education Harold Benjamin consulting editor) $3 25 1533

Contents: Part I, Understanding the learner: Physical growth and health. Scholastic ability Interests. Attitudes. Emotional and social maturity Part II, Directing learning: Preparing materials for learning. Cultivating abilities Testing for learning. The gains of learning. Maintaining the gains of learning. Favorable conditions for learning. Incentives. Index

Note A textbook for student teachers and for those in the teaching profession who wish to revise their methods in the light of recognized modern educational and psychological principles. The book is divided into two parts one designed to bring about an adequate understanding of the pupil, the other to aid the teacher in planning courses and using tests. The most widely used teaching methods are evaluated and attention drawn to the new trends in American education. Problems for discussion and selected references at the end of each chapter are designed to stimulate further interest in the issues discussed.

GATES ARTHUR IRVING AND OTHERS

Educational psychology by Arthur I. Gates Arthur T Jersild, T R. McConnell and Robert C Challman. Third edition. New York The Macmillan Company, 1948 818 p. illus. 21 cm $4 25 1534

Contents Introduction—the scope of educational psychology The development of behavior—introductory Physical and motor development *Emotional* development. Development of social behavior Mental development. The nature and measurement of intelligence. The practical uses of intelligence and aptitude tests The general nature of learning. Principles of guidance in learning. The development of meanings. Reasoning and problem solving. Transfer of training. Appraising progress by means of tests and other devices Appraising the school program through study of pupils as persons The adjustment of the individual. The adjustment process—tension reduction. Mental health hazards of the school child. Guidance of the individual child. The mental health of the teacher *Index of authors.* Subject index.

Note (1241) A standard and unusually successful introductory presentation of the facts and principles of educational psychology The book has evolved from the senior author's *Psychology for students of education* 923 but except for the fact that both works were designed for student teachers, there is little similarity The work was recast in essentially its present form, and the collaborating authors joined in its preparation, in the edition published in 1942 In preparing this edition the organization of the 1942 text was not changed fundamentally but many revisions were made nevertheless. The chapter Appraising the school program through study of pupils as persons" was added and the chapter "The adjustment process tension reduction" constitutes rewriting and expansion of material which in the previous edition was included in the chapter just preceding. A considerable number of the other chapters have been revised in part, and numerous additions have been made to the bibliography

HILGARD ERNEST ROPIEQUET

Theories of learning. New York Appleton Century-Crofts, Inc., 1948 409 p illus. 21 cm. $3 75 1535

Contents. Preface. The nature of learning theories. Thorndike's connectionism. Guthrie' contiguous conditioning. Hull's systematic behavior theory Skinner' descriptive behaviorism. Current functionalism. Gestalt theory Lewin's topological and vector psychology Wheeler's organismic psychology Tolman's sign-Gestalt theory Theories influenced by field conceptions. A point of view References and author index. Subject index.

Note. A critical study of current theories of learning The main points of each theory are discussed at adequate length and are related to experiments hich were designed by the author of the theory or by other investigators in order to support it or to test its validity The historical antecedents are sketched, and references are given to selection of the related literature. In the final chapter the author summarizes the present state of affairs in this important area of psychology and reaches the conclusion that the situation is not so disorganized as the existence of many divergent theories appears to indicate. He points to the large body of empirical knowledge and states that its organization into "a compact and agreed-upon systematic structure" may be accomplished within the next twenty years

KINGSLEY, HOWARD L

The nature and conditions of learning. New York Prentice-Hall, Inc., 1946 579 p illus 24 cm. $6 00 1536

Contents: Part I, Introduction and the fundamental nature of learning Introduction. The nature of learning. Part II, Six fundamental principles of learning: Maturation and learning. Varied activity and trial-and-error learning. Repetition. Motivation. Conditioning. Relationship and organization. Part III, Improvement, the learning curve, and physical handicaps to learning: The course of improvement. Physical handicaps to learning. Part IV Seven forms of learning: The development of motor skills. The development of perception. Memorizing. Comprehension—the development of understanding. Solving problems by thinking. Development of emotional activity The development of attitudes and ideals. Part Retention and transfer of learning: Retention, recall, and recognition. Transfer of training. Subject index. Author index.

Note A well-organized textbook on the principal or central topic of educational psychology namely learning. It presents systematic and comprehensive analyses of the process of learning, based on the concept of psychology as the study of activity and the concept of learning as the modification of the functional tendencies in individuals. Some familiarity with psychological principles and methods, such as would be acquired in an introductory college course in the subject, appears to be assumed. Special attention is paid throughout the book to experimental evidence bearing on the learning process. The chapters are supplemented by fairly extensive lists of references.

PETERSON, HARVEY ANDREW

Educational psychology Chapters 12, 16 & 18 by Stanley S Marzolf with a chapter on mental development in infancy and childhood by Nancy Bayley New York The Macmillan Company 1948 550 p illus. 21 cm. $4.00 1537

Contents The field of educational psychology The social environment of youth Mental development in infancy and childhood. Mental development in adolescence. The experimental evidence for cooperation in learning. Social learning. Motivation. Case studies in teaching and learning. Individual learning. Learning motor skills. Retention. Mental hygiene. The hygiene of work. The measurement of personality other than intelligence. The measurement of intelligence. The measurement of achievement. Some studies of the modification of heredity by environment. Vocational guidance. Index

ENGINEERING

GENERAL

BJORK, KENNETH

Saga in steel and concrete, Norwegian engineers in America. Northfield, Minn. Norwegian American Historical Association, 1947 504 p. illus. 24 cm. $4 00 1540

Contents A migration of skills. Pioneering the technical fronts. A Philadelphia story. Spanning America's rivers. A revolution in tunneling. Building to the skies. Men in metallurgy. Putting science into production. Of power, paper and ships. Engineers and engineering. Machines: their makers and masters. Architects, scholars, and chemists. The engineers organize. Toward a social philosophy. Index.

Note. An absorbing account of the part that Norwegian engineers have played in the industrial development of the United States, and a valuable addition to this phase of United States history. The author tells the story of the lives and engineering accomplishments of those Norwegian engineers who came to this country between 1870 and 1929, the period when Norwegian migration was at its height. Among the engineers and inventors discussed are such well-known men as Thalus Olsen, Edwin Rund, Carl Barth, and Ole Evinrude. The treatment is factual, and there are innumerable footnote references to periodical articles and other sources.

BROWN, ROBERT QUIXOTE

Introduction to engineering problems. New York Prentice Hall Inc. 1948 191 p. illus. 22 cm. $3 95 1541

Contents Introduction—the objectives of engineering problems. Logarithms and the slide rule. Some basic mathematical principles. Some basic physical principles. Good form in writing. Projects. Index.

Note The chief purpose of a course in engineering problems is to enable the beginning college student to discover whether he has the aptitudes and interests for a successful engineering career. This text, written for use in such courses, offers basic information in mathematics and physics together with approximately 200 problems designed to test the student's ability to comprehend such knowledge and to apply it. The writing of engineering reports, letters, and other forms that come within the work of engineers is covered compactly. The author is Professor of General Engineering at the University of Washington.

CRISPIN FREDERIC SWING

Dictionary of technical terms containing definitions of commonly used expressions in aeronautics architecture, woodworking and building trades, electrical and metalworking trades printing, chemistry etc. Seventh edition revised. Milwaukee Wis The Bruce Publishing Company 1946 427 p illus. 20 cm. $2 75 1542

Note (1259) A dictionary for students, draftsmen, mechanics, builders, technicians, and workmen generally. No attempt has been made to include all the technical terms in any field. Instead, selection of the terms most likely to be encountered by the workman in his daily work is provided. The present revision has been enlarged by the inclusion of additional terms and definitions relating to aeronautics, automechanics, electricity, plastics, and welding.

ENGINEERS JOINT COUNCIL

The engineering societies yearbook the periodical reference book on engineering societies, clubs & councils in the United States and Canada Joint, national, regional, state, local. Sponsored by the Engineers Joint Council. New York American Society of Mechanical Engineers, 1948 95 p. 28 cm. Paper $3.00. 1543

Contents (abridged) International engineering organizations. Engineering joint bodies in the United States. National engineering organizations. State, regional, and local engineering clubs, councils, and societies. Engineering employee organizations. Legal registration or licensing of professional engineers, and registration boards. Canadian engineering societies. Accredited engineering colleges and curricula. Bibliography. Index.

Note. A useful directory of engineering organizations. Its wide scope is indicated above. About 275 organizations in the U. S. A. and 11 organizations in Canada are listed and described. Information is given on such points as official name, address, purpose, affiliations, number and classifications of members, annual dues, annual budget, frequencies of meetings, names of committees, and publications.

FINCH, JAMES KIP

Trends in engineering education the Columbia experience. New York Columbia University Press 1948 140 p 20 cm. $2.00. 1544

Contents Introduction. The background of American engineering education. Engineering at Columbia. The general education problem. The undergraduate course. Engineering science. Graduate instruction and research. Research and patent policies. The student. Postgraduate needs and problems. Some educational contradictions. Appendix: The Columbia undergraduate (B.S.) curricula.

Note This book describes, reviews, and analyzes the chief influences in American engineering education and reports the plans and programs which Columbia University has devised and adopted to meet the needs of its engineering students. Such an account will be of interest not only to Columbia men but to all persons concerned with the problems of engineering education. The majority of the facts, ideas, and conclusions given in the book were thoroughly discussed in the weekly meetings, held throughout the academic year, of the Committee on Instruction of the School of Engineering of Columbia University of which the author has been a member for more than 25 years, so that the book in one sense is the work of the committee rather than of the writer alone.

GRINTER, LINTON ELIAS, AND OTHERS

Engineering preview an introduction to engineering including the necessary review of science and mathematics, by L. E Grinter Harry N Holmes, H. C. Spencer Rufus Oldenburger Charles Harris, R. G Kloeffler and V M. Faires. New York The Macmillan Company 1945 581 p illus. 24 cm. $4.50 Home study edition $6 00 1545

Contents. Outlines in science and engineering, orientation. Chemistry, the science of matter and molecules. Technical drawing, the language of engineering. Mathematics, a universal tool of engineering. The slide rule, the engineer's coat of arms. Light and electricity, hallmarks of civilization. Mechanics, the effects of forces. Thermodynamics, control of heat, cold, and power. Tables for mathematical calculations. Index.

Note The primary purpose of this book is to acquaint the prospective engineering student with the basic substance of engineering and thus enable him to discover whether or not he will like the field and has the necessary aptitudes for it. The main disciplines and tools of engineering are described in elementary language, and

the reader is introduced to the sciences underlying them. Job possibilities in the profession also are mentioned. The book is well illustrated and offers numerous practical problems and exercises. The home study edition contains an additional chapter on writing technical report, and comprehensive examination of the multiple-choice type.

INDUSTRIAL RESEARCH INSTITUTE INC.

Research in industry its organization and management prepared by and published for Industrial Research Institute, Inc. C. C. Furnas, editor New York D Van Nostrand Company Inc., 1948 574 p illus. 23 cm. $6.50 1546

Contents: The philosophy and objectives of research in industry The research laboratory as an operating department of the company Development. The research director's job. Organization charts in theory and practice. The research program. Selecting projects for research. The research budget. Research reports. Characteristics of the research man and the research atmosphere. Qualifications, training, aptitudes and attitudes of industrial research personnel. Procurement and selection of research personnel. Salary policy Personnel policies and personality problems. Professional growth of the research man. The location, design, and construction of modern research laboratory The tools of research Instruments and supplies. The research man's helpers Service personnel and facilities Translating research results into new products and factory procedures. By-products of research. Evaluating the results of research. The research director's responsibility in determining the company's patent policy Pattern of collaboration between the research department and the patent department. Licenses, royalties and patent pools. Relations with the public and government. Relations with the educational system. Relations with other firms and industry Research in America and Europe. Goals and problems for the future. Appendices Index.

Note: The material in this volume is authentic. Twenty-nine of the contributors are associated in executive capacities with the research programs of prominent American corporations, and the other four are associated with the National Research Council and other organizations concerned with the fostering of research. It is addressed primarily to industrialists, but some lay readers will find it of interest, particularly for the light it throws on industry's view of the importance of research. The appendices contain an extensive bibliography and also sample forms for agreements between employees and research personnel.

KILLEFFER, DAVID HERBERT

The genius of industrial research. New York Reinhold Publishing Corporation 1948 263 p illus 23 cm. $4 50 1547

Contents: Industrial research is methodical. The dual nature of research. Stating the problem. Two basic methods of research. Thinking out the problem. Process research. Product research. Equipment research. The progressive development of an idea. Three illustrative researches. The pilot plant and what happens there. Reports are essential. Evaluating research. Something about patents. Loose ends gathered here. Index

Note: The author believes that the "genius" of industrial research lies in planned, methodical investigations and accumulation of knowledge rather than in the kind of spontaneous inspiration that is popularly thought of as genius. His purpose has been to show by exposition and example how definite pattern of industrial research can be formed, and how scientific method of working and thinking can be cultivated by the young research worker. Part of the book's interest lies in its presentation of case histories of number of notable investigations, most of which are quoted from the papers of successful industrial chemists.

NATIONAL RESEARCH COUNCIL

Industrial research laboratories of the United States including consulting research laboratories. Eighth edition. Compiled by Callie Hull with the assistance of M Timms and L. Wilson. Washington, D C. National Research Council, National Academy of Sciences 1946 415 p. 25 cm. (National Research Council. Bulletin no. 113) $5.00 1548

Contents: Preface. List of laboratories. Appendix. Indexes.

Note (1141) An alphabetical list of laboratories maintained by manufacturing and other commercial companies. In compiling the directory liberal interpretation of the term "research" has been adopted to cover the development of industrial processes, methods, equipment, and production in broad sense. The name of the company laboratory address, president, executive officer in charge of research, staff research activities, and size of library if any are given for each entry In this edition 2443 companies are listed as compared with 2264 in the previous edition, and brief list of colleges and universities which offer research services to industry is now included.

RAPUZZI, ANN ELIZABETH, compiler

Directory of commercial and college laboratories Compiled by Ann E Rapuzzi under the direction of George N Thompson Chief of Division of Codes and Specifications. Washington D C. Government Printing Office, 1947 65 p 26 cm. (United States. National Bureau of Standards. Miscellaneous publication M187 Superseding Bureau of Standards Miscellaneous publication M171) Paper $0.30 1549

Contents: Introduction. Commercial laboratories Symbols references to nature of tests or researches. Classification of commodities tested. Alphabetical list of laboratories. Geographical listing of commercial laboratories College laboratories Alphabetical list of college laboratories. Geographical listing of colleges.

Note: Two long tables, one of 720 commercial, the other of 189 college and university laboratories, engaged in commodity acceptance testing on commercial basis, comprise the major part of this directory For each laboratory is given name and address and by key numbers the names of the commodities and the nature of the tests and research it carries on. The data were obtained by the Bureau of Standards directly from responsible officers of the laboratories listed.

SIMON LESLIE EARL

German research in World War II an analysis of the conduct of research. New York John Wiley & Sons, Inc. 1947 218 p illus. 23 cm. $4.00 1550

Contents: A brief view of German research at the end of the war Some fundamental considerations regarding research. Background of German weapons research. The wartime building of research. The German research and development organization. The functioning of German research and development. Summary of more important research in interior ballistics and terminal ballistics Summary of more important research in exterior ballistics and fire control. Summary of more important work in aerodynamics. Summary of more important instruments and measurement techniques. Summary of more important development work Comments and criticisms applicable to research in general. Index.

Note. The defeat and occupation of Germany in World War II offered unique opportunity to obtain secret scientific and technical information from nation in which science and technology were highly developed The author of this book, Director of the Ballistics Research Laboratory of the Ordnance Department of the U S. Army was one of the trained scientists sent by the United States to obtain this information. His technical findings have been reported in an official work, *Report on German scientific establishments* (available in photostat or microfilm from the Office of Technical Services, Washington, D C.) Although this book contains considerable amount of information on technical achievements, it is primarily critical review of the organization, and the successes and failures, of German research. Aside from its value as study of research methods, it also has some utility as source of information on German weapons, including some of the "super" weapons that had more propaganda than military value.

STOKLEY JAMES

Science remakes our world. Revised edition. New York Ives Washburn, 1946 318 p illus. 22 cm. $3.50 1551

Contents: New frontiers. Explosives in peace and war. Fuel for tomorrow The realm of plastics. Chemical clothes. Rubber from

tron and test tube. Chemistry and the farmer. Chemicals for cures. Vitamins. New metals. Kissing the ocean. The magic of glass. Higher faster farther. The age of electrons. Radio today and tomorrow. Light and light sources. Pictures of the future. New sounds in the theater. Scientists at war. Into the atom. The atomic powerhouse. Index.

Note (1160) A well-written account of the outstanding modern achievements of applied science and technology. It is intended for lay readers. Most of the material which has been added in this edition describes achievements during World War II. There are two entirely new chapters. One is concerned with the successful military exploitation of nuclear fission; the other treats such developments as radar, loran, jet propulsion, penicillin and DDT. The other chapters are essentially the same as in the first edition. The text is supplemented by a number of striking photographs.

WATERBURY, LESLIE ABRAM

Waterbury's vest pocket handbook of engineering revised by H. W Reddick, W M Lansford, C. O Mackey H. H. Higbie and H. S. Bull. Fourth edition. New York John Wiley & Sons Inc., 1947 386 p illus. 14 cm. $2.50 1552

Contents Algebra. Trigonometry. Mensuration. Analytic geometry. Differential calculus. Integral calculus. Theoretical mechanics. Mechanics of materials. Mechanics of fluids. Heat engineering. Electrical engineering. Illumination engineering. Radio and electronics formulas. Tables. Index.

Note A convenient reference book for use in the field and shop because it can literally be carried in a vest pocket. The data presented in each chapter are the more commonly needed facts, definitions and formulas. This edition has been extensively revised and data pertaining to heat transfer, illuminating engineering and mensuration have been added.

WOODBURY DAVID OAKES

Battlefronts of industry, Westinghouse in World War II. New York John Wiley & Sons Inc., 1948 342 p. illus. 24 cm. $3 50. 1553

Contents A challenge for guns. As a good citizen. Toward a shooting war. Ordnance in a big way. High pressure in steam. T about straight. War story of a factory. The eyes and ears of combat. Fish story. Engaging machines. T —and to be healthy. Layers of plastic. Hitting on all twelve. Research. Research helps war industry. X-rays and war. Lights to fight. Ordnance roundup. Vital measurements. "The impossible takes a little longer." The turbine forges ahead. Uranium. Battle of the isotopes. An end and beginnings. Additional notes. Index.

Note The story of America's over-all scientific and technical effort in World War II is told in James Phinney Baxter's prize-winning *Scientists against time* (see Index). So complex is the whole story that the Westinghouse Electric Corporation, one of the largest manufacturers participating, is mentioned in Baxter's work fewer than a dozen times. In this new book devoted entirely to the contributions of Westinghouse, the story still seems complex and the sum-total of achievement almost incredible. The writing is in Mr. Woodbury's familiar easy-to-read style. No sources are cited, but it can be assumed that the book is based largely on the records of the sponsoring corporation.

ZIMMERMAN OSWALD THEODORE AND IRVIN LAVINE

Scientific and technical abbreviations signs and symbols. Dover N H. Industrial Research Service 1948 476 p. illus. 21 cm. $7.50. 1554

Contents General list of abbreviations and symbols. Greek alphabet, numerical prefixes, metric abbreviations, mathematics, and statistics. Chemistry, chemical engineering, thermodynamics, heat flow, humidity and radiation. Mechanics, magnetics, hydraulics, acoustics, and illumination. Mechanical drawings, materials of construction, and shop terms. Electricity and electronics. Mapping. Railways. Aeronautics and aviation. Communications. Meteorology. Military. Medicine, botany and zoology. Commerce. Astronomy. Latin expressions, states, punctuation, and proof reading. Technical journals. Index.

Note The chief purpose of this handbook is to furnish answers to the question, "What is the standard abbreviation for ...?" rather than, "What does this abbreviation signify?" An ingenious reference worker will often be able to use it to answer the latter type of question also. The first section consists of about 7,000 terms alphabetically arranged and followed by their recommended signs or abbreviations. The sections devoted to special fields contain the standard abbreviations and symbols such as those adopted by the American Standards Association and, in addition, other abbreviations commonly employed in the particular field. A second edition was scheduled for publication in 1949.

MATHEMATICS FOR ENGINEERS

DULL, RAYMOND WILLIAM

Mathematical aids for engineers. New York McGraw Hill Book Company, Inc., 1946 346 p illus. 22 cm. $4 50 1555

Contents (abridged) Uniform scales. Logarithms as an implement. Organic growth. Organic decay or dying-out functions. Circles as tools. Vectors. Forces and couples. Ray and string polygons. Imaginary and complex numbers. Hyperbolic functions. Periodic and simple harmonic motion. Energy. Impulse—impact—momentum equations. Linear motion. Rotation. Plane motion. The increment Δx. Integrals. Differential equations of the first order. Differential equations of the second order. Linear differential equations of the *n*th order with constant coefficients. Index.

Note This book explains some of the operations in advanced mathematics that are useful to the present-day engineer. The exposition is written strictly from the engineer's viewpoint. The principles of the various mathematical operations are explained concisely, then their applications to engineering problems are shown; or as in the chapter on kinetics of rotation, the problem is stated and ways of solving it are indicated. A basic knowledge of calculus is presupposed.

MICHAL, ARISTOTLE D

Matrix and tensor calculus with applications to mechanics elasticity and aeronautics. New York John Wiley & Sons, Inc., 1947 132 p illus 23 cm. (Galcit aeronautical series) $3 00 1556

Contents. Part I, Matrix calculus and its applications. Algebraic preliminaries. Differential and integral calculus of matrices. Matrix methods in problems of small oscillations. Matrix methods in the mathematical theory of aircraft flutter. Matrix methods in elastic deformation theory. Part II, Tensor calculus and its applications. Space line element in curvilinear coordinates. Vector fields, tensor fields, and Euclidean Christoffel symbols. Tensor analysis. Laplace equation, wave equation, and Poisson equation in curvilinear coordinates. Some elementary applications of the tensor calculus to hydrodynamics. Applications of the tensor calculus to elasticity theory. Homogeneous and isotropic strains, strain invariants, and variation of strain tensor. Stress tensor, elastic potential, and stress-strain relations. Tensor calculus in Riemannian spaces and the fundamentals of classical mechanics. Applications of the tensor calculus to boundary-layer theory. Notes on part I. Notes on part II. References for part I. References for part II. Index.

Note. The purpose of this volume is to provide the research engineer with a working knowledge of the matrix and tensor calculus. The author, Professor of Mathematics at the California Institute of Technology, has stressed the practical aspects of the subject as utilized in the fields of physics, meteorology, electrical engineering, mechanical engineering, and aeronautical engineering.

MURNAGHAN FRANCIS DOMINIC

Introduction to applied mathematics. New York John Wiley & Sons, Inc. 1948 389 p. illus. 24 cm. (Applied mathematics series, edited by I. S Sokolnikoff) $5.00 1557

Contents Vectors and matrices. Linear vector functions. Function-vectors, Fourier series. Curvilinear coordinates. Laplace's equation. Spherical harmonics and Bessel functions. Boundary-value problems. Integral equations. The calculus of variations. The operational calculus. Index.

Note. Some of the fundamental concepts of higher mathematics that are finding wide application in present-day science and engineering are discussed in this text. The work is based on a course for graduate students that was given for twenty years by the author at the Johns Hopkins University and is intended for use in similar courses.

PEASE EDWARD MONROE JOSEPH AND GEORGE P WADSWORTH

Engineering trigonometry Scranton Pa. International Textbook Company, 1946 479 p illus. 22 cm. $4.00 1558

Contents (abridged) Trigonometry defined. Trigonometric functions. Illustrative engineering applications on preceding chapters. Logarithms. Stationary adjacent scales and slide rules. Trigonometric relations and identities. Complex numbers. Oblique triangles. Inverse functions. Process of inversion—graphs. Oblique triangles solved by complex numbers. Approximate number computations. Right spherical triangles. Oblique spherical triangles. Navigation. Appendices. Instructions for use of tables. Tables. Index.

Note: This comprehensive college textbook presents an intelligent compromise between the two points of view that argue on the one hand for emphasis (in book of this kind) on engineering applications, and on the other hand for rigorous treatment of pure trigonometry Although advanced methods are used when necessary the book presupposes no previous knowledge of the subject. In addition to the questions and problems at the end of each chapter, there are leading questions at the beginning of chapters, designed to orient and direct the student's thinking in the new material to be read.

PIPES, LOUIS ALBERT

Applied mathematics for engineers and physicists. New York McGraw Hill Book Company Inc., 1946 618 p illus. 23 cm. $5.50 1559

Contents: Infinite series. Complex numbers. Mathematical representation of periodic phenomena. Fourier series and the Fourier integral. Linear algebraic equations, determinants, and matrices. The solution of transcendental and polynomial equations. Linear differential equations with constant coefficients Laplacian transforms of use in the solution of differential equations. Oscillations of linear lumped electrical circuits. Elastic vibrations of systems with finite number of degrees of freedom. The differential equations of the theory of structures. The calculus of finite differences and linear difference equations with constant coefficients. Partial differentiation. The gamma, beta, and error functions. Bessel functions. Legendre's differential equation and Legendre polynomials. Vector analysis The wave equation. Simple solutions of Laplace's differential equation. The equation of heat conduction or diffusion. The elements of the theory of the complex variable. The solution of two-dimensional potential problems by the method of conjugate functions. The operational calculus. The analysis of nonlinear oscillatory systems. Index.

Note A classroom textbook that will also be useful to the practicing engineer as handy review It discusses many of the more familiar topics from advanced mathematics and explains their use in the solution of technical problems. The work is based on course formerly given by the author in the Harvard Graduate School of Engineering. Since the author's main purpose is to demonstrate the use of mathematics, he has not always included proofs, but he has included references to publications in which proofs will be found. A group of problems accompanies each chapter

REDDICK HARRY WILFRED AND F H. MILLER

Advanced mathematics for engineers. Second edition. New York John Wiley & Sons Inc., 1947 508 p illus. 22 cm. $5.00 1560

Contents Ordinary differential equations Hyperbolic functions. Elliptic integrals. Infinite series Fourier series. Gamma and Bessel functions. Partial derivatives and partial differential equations. Vector analysis Probability Functions of complex variable. Operational calculus. Appendix. Answers to problems. Index

Note: (1230) Courses given to civil, electrical, mechanical, and chemical engineering students at the Cooper Union Institute of Technology form the basis of this text. Throughout the volume the emphasis is placed on the practical applications of advanced mathematics to the solution of various types of engineering problems. Only minor changes have been made in this edition, but few new problems and brief sections on the mechanical-brake problem, combination of series and the vibrating membrane problem have been added. A short discussion of dimensional analysis is now included in the form of an appendix. Thorough grounding in the calculus is assumed.

SALVADORI, MARIO GEORGE

The mathematical solution of engineering problems with a collection of problems by Kenneth S Miller New York McGraw Hill Book Company Inc. 1948 245 p illus 23 cm. $3.50 1561

Contents: Introduction. A review of some basic mathematical concepts. Plane analytic geometry The numerical solution of algebraic and transcendental equations. The numerical solution of simultaneous linear algebraic equations. Elementary functions and power series. Fourier series expansion and harmonic analysis. Answers to alternate problems. Index.

Note: The distinguishing feature of this text is its purpose of aiding students to adapt their knowledge of theoretical mathematics to the solution of practical engineering problems. The book is planned for use in undergraduate engineering courses, and although the author assumes the student will have knowledge of mathematics through the calculus, he provides preliminary review of basic mathematical concepts. The numerous illustrative exercises incorporated into the textual material and the practical problems given at the end of each chapter constitute an important part of the instruction. The author is Associate Professor of Civil Engineering at Columbia University

SCHELKUNOFF, SERGEI ALEXANDER

Applied mathematics for engineers and scientists. New York D Van Nostrand Company, Inc., 1948 472 p illus 24 cm. (The Bell Telephone Laboratories series) $6.50 1562

Contents Complex numbers. Theory of approximation. Solution of equations. Power series. Differentiation. Integration. Vector analysis Coordinate systems. Exponential functions. Differential equations of the first order Differential equations of the second order. Differential equations of higher order Partial differential equations. Conformal transformations Contour integration. Linear analysis. The gamma function. Exponential integrals. Fresnel integrals. Bessel functions. Legendre functions. Formulation of equations. References. Index.

Note. As engineering advances, so do the demands upon the mathematical knowledge of engineers. This book deals with certain advanced mathematical concepts and procedures whose usefulness in several fields of mathematical physics or engineering have already been demonstrated even though they are not part of the mathematical equipment of the average graduate physicist or engineer Concepts of limited usefulness or so far applied only to highly specialized fields have not been included. The author is member of the technical staff of the Bell Telephone Laboratories.

APPLIED MECHANICS

ADVANCES IN APPLIED MECHANICS. Volume I. Edited by Richard von Mises and Theodore von Kármán. New York Academic Press, Inc., 1948 293 p. illus. 24 cm. $6.80 1563

Contents: Recent advances in the mechanics of boundary layer flow, by H. L. Dryden. Modern trends in nonlinear mechanics, by N Minorsky Survey of papers on elasticity published in Holland 1940–1946, by C. B. Biezeno. A mathematical model illustrating the theory of turbulence, by J. M. Burgers. On numerical methods in wave interaction problems, by H. Geiringer. On Bergman's integration method in two-dimensional compressible fluid flow by R. Mises and M. Schiffer. Bibliography Author index. Subject index.

Note: This new series resembles in plan number of other periodical surveys of selected fields of scientific endeavor. Each paper is written by an expert and is based both on the author's own knowledge of the field and on the related literature. The chief purpose of the work is to aid research workers and scientists in keeping abreast of developments in fields closely allied to their own specialties Accordingly the treatment of each subject is on professional level.

DALLA VALLE, JOSEPH MARIUS

Micromeritics the technology of fine particles. Second edition. New York Pitman

Publishing Corporation 1948 555 p illus. 23 cm. $8 50 1564

Contents Principal symbols used in text and their units. Introduction. Dynamics of small particles. Shape and size-distribution of particles. Methods of particle-size measurement. Theory of sieving and grading of materials. Characteristics of packings Behavior of particles under pressure. Diffusion of particles. Electrical, optical, and sonic properties. Thermodynamics of particles. Surface properties of particles. Chemical properties of small particles. Flow of fluids through packings. Infiltration and particle-moisture relationships. Capillarity Determination of particle surface. Muds and slurries. Transport of particles. Dust clouds. Atmospheric and industrial dust Collection and separation of particulate matter from air Theory of fine grinding Sampling. Selected bibliography Appendices. Author index. Subject index.

Note: (1290) When the first edition of this book was published in 1943 it constituted the first important treatise on the behavior and physical properties of small particles larger than colloids. Again it has been the author' purpose to provide fundamental information regarding particle-measurement, size-distribution, packing arrangements, and the application of this knowledge in such fields as soil and mineral physics, chemical engineering, geology and hydrology In this edition several chapters have been revised, but the major change is the addition of the chapters that deal with the behavior of particles under pressure, particle dispersion by diffusion, surface properties of particles, dust and smoke clouds, and sampling techniques. The bibliography has been expanded from 38 to 42 pages.

FAIRMAN SEIBERT, AND CHESTER S CUTSHALL

Engineering mechanics. Second edition New York John Wiley & Sons, Inc., 1946 267 p illus. 24 cm. $3.00 1565

Contents Part I, Statics Introduction—General principles Equilibrium of coplanar forces. Stresses and reactions in simple structures. Equilibrium of forces in space. Friction. Centroids and center of gravity Moment of inertia of area Product of inertia of area—maximum and minimum moments of inertia. Moment of inertia of mass. Part II, Kinetics: Rectilinear motion. Curvilinear motion and rotation. Work, energy and power Dynamics of rotating bodies. Plane motion Impulse, momentum, and impact

Note (1291) An elementary textbook for engineering students who have studied calculus Special note should be made of the explanation of the graphic method with the use of Bow's notation, the practical applications of the gyroscopic principle to ships, airplanes, etc., and the extended treatment of certain phases of plane motion. This edition is essentially the same as that of 1938 except for the division of one chapter the addition of the chapter entitled "Products of inertia of area, and the addition of new problems.

JENSEN ALFRED

Applied engineering mechanics New York McGraw Hill Book Company Inc. 1947 316 p. illus. 23 cm. $3 00 1566

Contents (abridged) Part I, Statics: Basic principles. Coplanar force systems. Non-coplanar force systems. Friction. Centroids and centers of gravity Moments of inertia of areas Part II, Dynamics Basic principles. Kinematics of rectilinear motion. Kinetics of rectilinear motion. Curvilinear motion. Kinematics of rotation Kinetics of rotation. Work energy and power Appendix Centroids of areas by integration Moments of inertia of plane areas. Moments of inertia of solid bodies. Variable acceleration. Derivation of the laws of motion. Index.

Note An introductory text for use in vocational schools and first courses in engineering colleges The simplicity of the treatment and the large number of practice problems make it suitable also for home study Each section includes many examples and problems hich stress the application of the principles of mechanics to the solution of everyday engineering problems Both analytical and graphical methods of solution are illustrated.

SLOANE ALVIN

Fundamentals of engineering mechanics. New York Prentice-Hall, Inc., 1947 379 p illus 23 cm. (Prentice-Hall engineering design series John A. Hrones editor) $5 65 1567

Contents: Part I, Statics: The free body of mechanics. The force system. Graphical statics. The three-dimensional force system. Distributed forces. Friction. Virtual work. Part II, Dynamics: Velocity Acceleration. Translation. Rotation. Work and energy Impulse and momentum. Appendix. Index.

Note An introductory textbook for the second or third year in engineering-college curriculums. The author stresses the need for simplifying mechanics problems by considering complex forces in machines and structures as series of simple forces acting on free rigid bodies. Both the text and the more than 500 problems are designed to teach the student how to think as an engineer Integral calculus and physics are prerequisites. The author is Associate Professor of Applied Mechanics at Massachusetts Institute of Technology

TIMOSHENKO STEPHEN, AND D H. YOUNG

Advanced dynamics New York McGraw-Hill Book Company Inc., 1948 400 p. illus. 23 cm $5.50 1568

Contents Dynamics of particle. Dynamics of system of particles. Dynamics of systems with constraints. Theory of small vibrations Rotation of rigid body about fixed point. Appendix Dimensional analysis and theory of models. Index.

Note A textbook designed primarily for courses in advanced mechanics in engineering schools. It covers the more important methods of mathematical analysis that are available for the solution of such varied and complex problems in dynamics as vibration, engine balancing, the gyroscope and its applications, the rectilinear motion of rockets, and the motion of projectiles through the atmosphere. Approximate methods and rigorous methods of arriving at solutions are both demonstrated Lagrangian equations are discussed at some length. The book should prove useful to graduate engineers as well as to students

VIBRATION

CHURCH, AUSTIN HARRIS

Elementary mechanical vibrations. New York Pitman Publishing Corporation, 1948. 200 p illus. 23 cm. $3.25 1569

Contents Partial list of symbols. Introduction. Undamped free vibrations—single degree of freedom Undamped forced vibrations—single degree of freedom. Damped free vibrations—single degree of freedom Damped forced vibrations—single degree f freedom. Undamped vibrations—two degrees of freedom. Multimass torsional systems. Equivalent torsional systems. Multimass lateral systems. Balancing. Index.

Note. A rather brief work whose purpose is to provide students and engineers with sufficient basic knowledge of vibrations to enable them to solve common vibrational problems It is based on material used in courses at New York University The treatment assumes knowledge of mechanics and calculus. Review problems are included and there are numerous footnote references to related literature.

DEN HARTOG, JACOB PIETER

Mechanical vibrations. Third edition. New York McGraw Hill Book Company Inc., 1947 478 p. illus 23 cm. $6 00 1570

Contents: Kinematics of vibration. The single degree of freedom system. Two degrees of freedom. Many degrees of freedom. Multicylinder engines. Rotating machinery Self-excited vibrations. Systems with variable or non linear characteristics. Appendices. Bibliography Answers to problems Index.

Note (1296c) The wide applicability of the knowledge of vibration can be indicated by pointing out that the following are only few of the vibration problems discussed in this book: flutter of airplane wings, vibration of turbines and turbine blades, humming of electric clock motors, "shimmy" of automobiles, vibration of ships' propellers, "galloping" of transmission lines, and vibration of helicopter rotors. However these cases are only incidental to the main purpose of the book—an introductory but rather comprehensive exposition for engineering college students of vibration theory and means f controlling undesirable vibrations. Compared to the second edition (1940) the principal changes in this edition have been made in the problems, the bibliography and in discussions of such topics as airplane wing flutter helicopter rotors, and harmonic analyzers

SOCIETY OF AUTOMOTIVE ENGINEERS, INC.

The development of improved means for evaluating effects of torsional vibration on in-

ternal combustion engine installations. New York S.A.E. War Engineering Board of the Society of Automotive Engineers Inc., 1945 578 p illus. 29 cm. $10 00 1571

Contents (abridged) Phase I, Techniques for measuring torsional vibration. Instruments used by General Motors Corporation for torsional vibration measurements on Diesel engines. Investigation at Fairbanks, Morse & Co. of recording torsional vibration with C.E.L. high speed torsiograph and Geiger standard torsiograph. Methods for measuring torsional vibration as used at Chrysler Corporation. Methods for determination of torsional stresses as used at Caterpillar Tractor Co. Phase II, Techniques for estimating nominal stresses. Analysis of torsional vibration. Methods for calculating torsional vibration. Simplified method for torsional vibration calculations as used at Chrysler Corporation. Phase III, Significance of estimated nominal stresses; Crankshaft strength and experimental stress analysis methods. Selection of steel for marine Diesel engine crankshafts. Harmonic balancer design. Centrifugal pendulum dynamic damper. Discussion of significance of estimated nominal stresses. Application of torsional vibration dampers to an automotive engine. Phase IV Simplification of instrumentation for indicating dangerous stresses. Reports on action taken by S.A.E.–W E B Torsional Vibration Subcommittees. Index.

Note The main body of this report consists of a series of edited technical papers which were written by physicists and automotive engineers. In effect the report, which was originally compiled for the United States Navy is a careful survey of current knowledge and of testing techniques pertaining to torsional vibration in internal combustion engines, particularly the Diesel type; and it represents an important contribution toward a solution of the problem of crankshaft breakage in such engines.

HYDRAULICS

HUNSAKER, JEROME CLARKE AND BRANDON GARNER RIGHTMIRE

Engineering applications of fluid mechanics. New York McGraw Hill Book Company Inc., 1947 494 p illus. 23 cm. $5 00 1572

Contents Preface. Introductory survey Statics. Kinematics and continuity Dynamics of an ideal fluid. Energy relations for steady flow. Momentum relations for steady flow Dimensional analysis and similitude. Incompressible flow in closed conduits. Compressibility phenomena Drag. Wing theory Hydrodynamic lubrication. Boundary lubrication. Hydraulic turbines. Pumps, fans, and compressors Propellers and jets. Fluid couplings and torque converters. Hydraulic transmissions and controls Appendix. Problems. Index.

Note: The authors have based this work on twelve years' experience in teaching fluid mechanics in undergraduate courses at the Massachusetts Institute of Technology It is frankly a college textbook and furthermore is intended primarily for use in introductory courses that will be followed by more advanced ones. The fundamental principles and basic mathematical equations are treated rather extensively in the earlier chapters. In the later chapters, the design and performance of various devices that depend upon the mechanical behavior of liquids and gases under various conditions are analyzed. These range from lubricated bearings to "basic bombs." Short lists of references for the guidance of students are appended to the chapters.

KING HORACE WILLIAMS AND OTHERS

Hydraulics by Horace W King Chester O Wisler and James G Woodburn. Fifth edition. New York John Wiley & Sons Inc., 1948 351 p. illus. 22 cm. $4.00 1573

Contents: Fundamental properties of fluids. Principles of hydrostatic pressure. Hydrostatic pressure on surfaces. Relative equilibrium of liquids. Fundamentals of fluid flow Orifices, tubes, and weirs Pipes. Open channels. Hydrodynamics. Hydraulic similitude and dimensional analysis. Answers Index.

Note. (1303) An introductory exposition of fundamental principles and of selected engineering applications. It is used chiefly as an undergraduate textbook, but is useful also as a concise review for practicing engineers who are not specialists in this field. A considerable amount of revision is apparent in this edition. The chapter on hydraulic similitude and dimensional analysis, which has pertinence to the use of models in hydraulic engineering design, has been added.

STEPANOFF, ALEXEY JOAKIM

Centrifugal and axial flow pumps, theory design, and application. New York John Wiley & Sons Inc. 1948 428 p. illus 23 cm. $7.50 1574

Contents: Selected topics from hydraulics. Definitions and terminology Theory of the centrifugal pump impeller Vortex theory of Euler's head. Specific speed and design constants. Design of mixed flow impellers for centrifugal pumps. Pump casing. Axial flow pumps. Hydraulic performance of centrifugal pumps. Leakage, disk friction, and mechanical losses. Axial thrust. Cavitation in centrifugal pumps. Special operating conditions of centrifugal pumps. Special problems of pump design and application. Shaft design for critical speeds. Special problems and applications of vertical turbine and axial flow pumps. Special problems and applications of centrifugal pumps. Centrifugal-jet pump water systems Index.

Note This text, written for hydraulic engineers and advanced students, provides a detailed discussion of the basic principles of the subject. Theoretical aspects are clearly interwoven with practical descriptions of the steps to be followed in designing pump parts and discussions of the behavior of centrifugal pumps under varying conditions. Many of the problems discussed had their origin in the new uses to which such pumps have been put in recent years, and constant reference is made to experimental studies carried out in connection with cavitation, axial and radial thrust, control of head-capacity brake-horsepower curves, etc.

WISLICENUS, GEORGE FRIEDRICH

Fluid mechanics of turbomachinery New York McGraw Hill Book Company Inc., 1947 613 p. illus. 20 cm. $7.50 1575

Contents: Part I, Introduction. Introduction to the fluid mechanics of turbomachinery Part II, Similarity considerations Fundamental similarity considerations. Influence of viscosity and turbulence described by similarity considerations, and model laws. The influence of cavitation described by similarity considerations. Part III, Theory of flow in hydrodynamic machines. Introduction and the principles of one-dimensional fluid mechanics (hydraulics) Fundamental theory of hydrodynamic machines. One-dimensional theory of hydrodynamic machines. Two-dimensional fluid motions of constant energy Two-dimensional and irrotational fluid motions in axial-flow turbomachinery Two-dimensional theory of frictionless flow in radial flow turbomachinery The three-dimensional problem of turbomachinery and its two-dimensional solutions. Influence of fluid friction on the flow in turbomachinery Hydraulic theory of cavitation in turbomachinery Hydrodynamic transmissions. Propulsion machinery Limitations of the present theory of turbomachinery. Part IV Mechanics of the flow of compressible fluids applied to turbomachinery: Thermodynamics of the flow of gases without losses in mechanical energy Thermodynamics of the flow of gases considering losses in mechanical energy Application to turbomachinery Introduction to the two-dimensional theory of the flow of compressible fluids The influence of compressibility described by similarity considerations. Part v Geometry of turbomachinery: General principles and the geometry of systems with no rotation. The geometry of systems with rotational and radial flow The geometry of systems with rotational and axial or conical flow Geometry of systems with rotational flow and transitions between axial, conical, and radial flow Symbols. Index.

Note Turbomachinery as the term is used here, includes such machines as centrifugal pumps and compressors, hydraulic and gas turbines, ship and airplane propellers, torque converters, hydraulic transmissions and couplings. This book is concerned chiefly with presentation of theory that can be applied in the design of such machinery but the author also recognizes that, in its present state, theory must be supplemented by experiment in the design of many machines. The book contains problems to be worked and is, in general, organized as a college textbook, nevertheless it should be of interest to engineers in several branches of contemporary technology

ENGINEERING MATERIALS

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on testing of bearings Forty ninth annual meeting American Society for Testing Materials, Buffalo, N Y., June 24–28 1946 Philadelphia American Society

for Testing Materials 1947 65 p illus. 23 cm. Paper $1.50 1576

Contents: Introduction by E. W Upham. Life testing of plain bearings for automotive engines, by R. T Johnson. Fatigue testing machines for ball and roller bearings, by T Barish. Metallographic observations of ball bearing fatigue phenomena, by A. B. Jones. Fatigue testing of roller bearings, by H. R. Gibbons. Testing of bearings under controlled load, by J M. Frankland and C. R. Innes.

Note These papers discuss special testing machines procedures and test results. They are addressed to mechanical engineers.

BRADY GEORGE STUART

Materials handbook, an encyclopedia for purchasing agents, engineers executives, and foremen Sixth edition New York McGraw Hill Book Company Inc., 1947 831 p illus. 21 cm. $7 00 1577

Note (1317) The purpose of this useful handbook remains the same in the sixth edition. It is designed as desk book of basic and other general information on both natural and manufactured materials of commercial or technical importance. The typical article is about one page in length, deals with such subject as bearing metal and gives such data as composition, properties, uses, and the names of several manufacturers of special alloys. The amount of revision in the present edition as compared to the fifth (1944) is indicated by the fact that there are about 1,100 new entries in the index, accounting for an increase of about 14 percent. A fair number of the old articles have been rewritten. Some of the new articles are the result of reclassification of material, but many of them contain newly added information. The old appendix has been expanded and is now labeled "Part II.

COOLEY PAUL A., AND ANN E RAPUZZI compilers

National directory of commodity specifications classified and alphabetical lists and brief descriptions of specifications of national recognition Third edition. Prepared by Paul A. Cooley and Ann E. Rapuzzi under the direction of A. S McAllister Chief of the Division of Codes and Specifications Washington D C. Government Printing Office, 1945 1311 p 27 cm. (United States. National Bureau of Standards Miscellaneous publication M178 superseding Miscellaneous publication M130) $4.00 1578

Contents: Introduction Classified list of specifications Animals and animal products (except wool and hair) Vegetable food products and beverages. Vegetable products, except food, fibers, and wood. Textiles. Wood and paper Nonmetallic minerals. Ores, metals, and manufactures (except machinery vehicles, and electrical supplies) Machinery and vehicles Chemicals and allied products Commodities not elsewhere classified. Directions for obtaining copies of specifications. Names and addresses of standardizing agencies. Index and alphabetical list of commodities.

Note. This extensive publication, of which former editions appeared in 1925 and 1932 is classified list of printed specifications for the manufacture of every significant manufactured product, with brief description of the contents of the specifications. Included are the standards and specifications of various trade associations, technical societies, and national industrial organizations of all kinds, as well as the purchase specifications of various branches of the Federal Government The index, closely printed section of 177 pages, provides an alphabetical key to all the commodities. A supplement has been published as follows P A. Cooley *Supplement to National directory of commodity specifications* Washington, D C Government Printing Office 1947 323 p $1 25

MEYER, LOUIS H.

Plywood what it is—what it does. New York McGraw Hill Book Company Inc., 1947 250 p illus. 24 cm. $3.50 1579

Contents. General characteristics of plywood. Unique plywood characteristics. Plywood applications and techniques. Plywood marketing. The products: Softwood plywood. Hardwood plywood. Specialized products. Tables. Glossary Bibliography Appendix. Index.

Note A handy brief survey in which most of the material relates to types, characteristics and uses of plywoods commercially available in the United States. Thirteen pages are devoted to the various adhesives used to bond plywood. The book is addressed mainly to such persons as engineers and architects, who desire practical information, but there is also much in it to interest the amateur craftsman and even the general reader There are many pictures of commercial products in which plywood has been used, and series of twenty-two photographs shows the patterns of modern veneers. Data on such matters as commercial sizes, grades, and strength are presented. Some information, for example that on panels with honeycomb cores, is presented in book form for the first time.

MOORE, HERBERT FISHER

Textbook of the materials of engineering with a chapter on Concrete by Harrison F Gonnerman, a chapter on Crystalline structure of metals by Jasper O Draffin, and a chapter on Plastics by William N Findley Seventh edition. New York McGraw Hill Book Company Inc. 1947 500 p illus. 23 cm $5 00 1580

Contents Introductory Cohesion stress and strain. The elastic strength of materials. The failure of materials by flow or creep. The failure of materials by fracture. The failure of metallic materials by corrosion and by wear Working stress; factor of safety; selection of materials. Crystalline structure of metals. The production of the common structural metals. The processing of structural metals casting. The processing of structural metals; alloying; heat-resistant metals. The processing of structural metals; heat treating and aging; powder metallurgy Tables of strength, ductility and notch toughness of typical structural metals. The processing of metals; strengthening metal parts by surface treatment, welding. Wood. Stone, brick, and terra cotta. Cementing materials; gypsum, lime, portland cement, special cements. Concrete. Plastics. Rubber rubberlike materials, leather rope. Testing and inspection testing machines. Specifications for materials. Appendix. Questions. List of visual aids. Index.

Note (1330) An introductory textbook that provides concise information regarding the physical properties and methods of manufacture of the most common structural materials. This edition has been revised to take into account new types of materials and new processing techniques, many of which are evolved during the war years. The major change lies in the increased emphasis given to metal processing. New materials and techniques not discussed in the previous editions include annealing, electroplating, decarburizing of steel, induction hardening, shot peening, powder metallurgy molybdenum, tungsten, vanadium, and the properties of glass and plywoods.

MURPHY GLENN

Properties of engineering materials. Second edition. Scranton Pa. International Textbook Company 1947 459 p. illus. 23 cm. (International texts in civil engineering, the late Charles Edward O Rourke, consulting editor) $6.50 1581

Contents Materials and the engineer Behavior of materials under load Failure of materials. Use of properties in design Qualities other than strength. Control of the properties of materials. The iron-carbon system. Manufacture and properties of the ferrous metals. Non-ferrous metals. Timber Stone. Clay products. Cementing materials. Concrete. Miscellaneous materials. Review questions. Answers to problems. Index to properties. General index.

Note (1331) A study of the basic principles which are responsible for the physical and chemical behavior of engineering materials. The volume is intended as an undergraduate engineering school text rather than as source book of data, and as such it includes problems to solve and references for collateral reading. In the second edition the plan remains the same but revisions have been made to include new chapter on control of the properties of materials, and recent developments in powder metallurgy laminated products, cold treatment of metals, high temperature alloys, silicones, and synthetic rubber have been included.

NORTHEASTERN WOOD UTILIZATION COUNCIL, INC.

Recent progress in laminated wood. New Haven, Conn. Northeastern Wood Utilization Council Inc. 1948 72 p. illus. 23 cm. (Bulletin no 22) Paper $2.00 1582

Contents: Highlights of wood laminating, R. M. Carter and J. C. Keith. Laminated Connecticut red oak, F F Wangaard and M. V Pabetka. High-grade and low-grade lumber in glued laminated members, A. G. H. Dietz. Laminating as applied to the manufacture of tennis rackets, J M. Tyson. The conversion of slabwood to laminated lumber R. M. Flowers. Laminated wood rolls, Timber Engineering Co., Washington, D C. Progress in laminating picker sticks, S. M. Tatem. The manufacture of laminated flooring by continuous process (a condensation of Tennessee Valley Authority reports)

Note. The papers comprising this little volume provide brief description of the methods and equipment which have been devised to produce such wooden products as furniture stock, flooring, bowling pins and handles through the laminating process. Although basic principles and theories are discussed the majority of the papers are concerned with actual manufacturing techniques and problems. Three of the papers include bibliographies, but there is no index.

PERRY THOMAS DOANE

Modern plywood. Second edition. New York Pitman Publishing Corporation 1948 458 p illus. 23 cm. (Pitman books on industrial materials and processes, Alexander Klemin, advisory editor) $6.00 1583

Contents: Introduction, by Wilson Compton. Glossary of trade terms used in the plywood industry Brief history of plywood. Advantages of plywood. Adhesives for plywood Characteristics of modern plywood. Veneer manufacturing. Plywood manufacturing. High-density plywood. Plywood in industry Engineering data on plywood. Grading rules. Testing adhesives. Index.

Note: (1131) A comprehensive survey of the manufacture, properties, and uses of plywood. Approximately equal emphasis is placed upon the manufacture of plywood and the manufacture of articles from plywood. In this edition the detailed descriptions of manufacturing methods have been revised to cover recent developments. Thus the chapter on adhesives has been more than doubled in size to include new material on animal, vegetable, and especially synthetic resin glues; and the chapter on manufacturing methods contains new sections on progressive gluing, metal-to-wood gluing, and curing of resins by electrical high-frequency methods. The excellent bibliography of the 1942 edition has been brought up to date, but the references are now grouped at the end of each main section.

WHITE, ALFRED HOLMES

Engineering materials. Second edition. New York McGraw Hill Book Company Inc. 1948 686 p illus. 24 cm. $6 00 1584

Contents (abridged) Fundamental properties of solids. Iron and its alloys with carbon. Manufacture of iron and low-carbon alloys from the ore. Early methods of producing wrought iron and steel from pig iron. Manufacture of steel by the Bessemer open hearth, and electric-furnace processes. Properties of plain carbon steel as influenced by fabricating operations. Alloy steels with low-alloy content. Properties of high-alloy steels including tool steels, stainless steels, and alloys for high-temperature service. Castings of steel, malleable iron, and gray iron. Copper nickel, zinc, and their alloys. The light metals—aluminum, magnesium, beryllium, and their alloys. The soft metals—lead, tin, and their alloys. Bearing metals. Rocks and their decomposition products. Clay products. Lime, gypsum, and magnesium oxychloride products. The silicate cements. Fuels and combustion. Water and its industrial utilization. Soap and other detergents. Wood and wood products. Organic protective coatings, old type. Synthetic materials for plastics, adhesives, and protective coatings. Plastics, laminates, and synthetic coatings. Index.

Note (1131) Although this volume is intended primarily for use as text in college engineering courses, the compilation of essential data regarding the manufacture, properties, and uses of engineering materials makes it of value also as reference tool for the practicing engineer This edition has been extensively revised to incorporate developments during World War II, particularly in light metals and plastic materials. New chapters have been added on wood and wood products and various synthetic materials, and the chapters on carbon steel, alloy steels, and light metals have been rewritten and enlarged. The brief chapter bibliographies have been brought up to date.

ZIMMERMAN OSWALD THEODORE AND IRVIN LAVINE

Industrial Research Service's handbook of material trade names. Dover N H Industrial Research Service 1946 503 p. 23 cm. $7.50 1585

Contents: Trade names beginning with letters. Trade names beginning with numbers. Directory

Note. This compilation, intended for the engineer purchasing agent, manufacturer and salesman, lists products by the trade names under which they are sold whether the names are registered trade marks or not. It includes products currently manufactured and used in industry together with few consumer products. A noteworthy feature is that physical and chemical properties of many of the products listed are given in summary form. Manufacturers' names and addresses and uses are given in all cases. About five thousand names are included, representing products of more than eight hundred manufacturers.

CIVIL ENGINEERING

SURVEYING

BOUCHARD HARRY

Surveying. Third edition Scranton Pa. International Textbook Co., 1947 647 p illus. 20 cm. $6 00 1586

Contents: Introduction. Measurement of horizontal distances. Measurement of vertical distances. The measurement of angles. Field operations with the transit. The direction of lines. Traverse surveys. Curvilinear surveys. Triangulation. Topographic surveys. Hydrographic surveys. Earthwork. Special surveys. United States public land surveys. Municipal surveys. Latitude, longitude, azimuth, and time. The adjustment of instruments Errors Constructing and finishing maps. State coordinate systems. Tables. Index.

Note (3160) Detailed treatment of many topics in this standard textbook for student engineers makes it suitable as reference work for practicing engineers and surveyors as well. Since the publication of the previous edition (1940) about twenty states have legalized the state system of plane coordinates established by the U S. Coast and Geodetic Survey In this edition new chapter has been included to explain these state systems and the advantages of keying local surveys to their control points. Also, new material on the use of aerial photographs in mapping has been added to the chapter on topographic surveys.

BREED CHARLES BLANEY AND GEORGE L HOSMER

The principles and practice of surveying Volume I Elementary surveying. Eighth edition. New York John Wiley & Sons Inc. 1945 717 p illus 19 cm. $4 50 1587

Contents. Part I, Use, adjustment, and care of instruments General definitions—measurement of lines—adjustment of errors. Measurement of direction. Measurement of angles. Measurement of differences of elevation. Part II, Surveying methods: Land surveying. Traverse lines—location of buildings, miscellaneous surveying problems. The stadia method—the plane-table method Observations for meridian and latitude Leveling. City surveying—lines and grades for construction—survey of city lots, buildings and party walls. Contours—miscellaneous topographical surveying methods. Mine surveying Part III, Computations: General principles—miscellaneous problems—earthwork computations. Calculations relating to traverses. Part IV Plotting: Drafting instruments and material—process prints. Methods of plotting. Finishing and filing drawings. Tables. Appendices.

—— The principles and practice of surveying. Volume II Higher surveying. Sixth edition. New York John Wiley & Sons Inc. 1947 674 p illus (part col'd) 19 cm. $4 50 1588

Contents: Part I, Control of the survey Control—triangulation—traverse. Astronomical observations Precise, trigonometric, and barometric leveling. Part II, Filling in topographic details: The transit and stadia method. The plane-table method. The relation of geology to topography Part III, Photogrammetric surveying Ground photogrammetry Aerial photogrammetry Stereo photogrammetry Part IV Hydrographic surveying and stream gaging: Hydrographic surveying Measurement of the flow of water in open channels. Part Constructing and finishing maps Map projections. Plotting and finishing topographic and hydrographic maps Tables Appendices

Note (3160a) A comprehensive text for students and reference work for practicing surveyors that has been used in various editions for about forty years. A current set consists of the editions listed above Revisions in the eighth edition of volume include rewriting of the text on public land surveys to bring it into accord with current practice in the United States. Revisions in the sixth edition of volume II include changes in the material on triangulation, photogrammetric surveying, stream gaging, and map projection.

HOSKINSON ALBERT J, AND J A. DUERKSEN

Manual of geodetic astronomy determination of longitude, latitude and azimuth. Washington D C Government Printing Office, 1947 205 p illus 26 cm (United States. Coast and Geodetic Survey Special publication no 237) Paper $1 00 1589

Contents: Introduction. Part I, Determination of longitude: Longitude determination with the Bamberg transit. Instruments. Astronomical tent. Equatorial value of longitude micrometer. Level value. Mean width of contact strips. Lag in the cradle fiber. Camp location, station site and instrumental setup. Adjustments of the instruments. Longitude determination. Part II, Determination of latitude by the Horrebow-Talcott method: Introduction. General instructions for latitude work. The Bamberg broken-telescope transit. Observing list for latitude. Directions for observing. Latitude computation. Part III, Determination of the astronomic azimuth of direction Definitions Specifications for Laplace azimuth. Instruments. Instrument support and protection. Determination of azimuth. Direction method. Micrometer method, azimuth determinations in high latitudes with the Bamberg broken-telescope transit. Appendix Latest procedure in longitude determination. Reduction of mean to apparent place. Correction to azimuth for the elevation of the mark. Correction for the displacement of the pole. Rejection of doubtful observations. Probable errors of adjusted values. Astronomical refraction. Tables Explanation of tables. Index

Note The material in this manual is the product of the accumulated experience in office and field of the members of the U. S. Coast and Geodetic Survey from its earliest days to the present. Its purpose is "to set forth the methods currently used by this Survey in its astronomical work in the field and to describe in some detail the office methods used in computing and processing the field records. It supplants previous manual, Special publication no. 14, *Determination of time longitude, latitude and azimuth.*

KIELY EDMOND R.

Surveying instruments their history and classroom use. New York Bureau of Publications, Teachers College Columbia University 1947 411 p illus 23 cm. $3 00 (National Council of Teachers of Mathematics. Nineteenth Yearbook) 1590

Contents Beginnings in Egypt, China, and Babylonia. Developments in Greece and Rome. Contributions of medieval Europe, Islam, and India. Advancements in Europe during the Renaissance. Development of practical geometry in the schools. Applications of geometry trigonometry in simple surveying Appendix. Bibliography. Index.

Note. Addressed to teachers of high school mathematics with the purpose of interesting them in simple surveying as part of the program for geometry and trigonometry classes, and of providing them with sufficient exercises to carry out such program. About two-thirds of the book is devoted to the history of the development of surveying instruments from early times through the seventeenth century The construction and use in various periods and countries of such devices as levelling and right-angle instruments, the astrolabe staff combinations, and compasses are descriptively presented and are illustrated by old prints and diagrams. Simple outdoor surveying exercises conclude the book. These are selected to illustrate basic geometrical principles and their solutions requiring the use of instruments are outlined. Since, however, the author believes that proficiency with instruments can be acquired only by practice, few directions are included for their use.

Photogrammetry

KISSAM PHILIP

Surveying instruments and methods for surveys of limited extent. New York Mc Graw Hill Book Company Inc., 1947 384 p illus. 23 cm. $3.50 1591

Contents: Part I Surveying and its applications. The surveying method. Horizontal measurement. The transit. Use of the transit. Adjustment of transit. Traverses. The level and bench-mark leveling. Adjustment of level. Leveling procedure. Establishing line and grade for construction. Miscellaneous operations. Topographic surveying. Drawing maps and keeping records. Part II Tables. Visual aids. Index.

Note: The material in this short textbook has been selected from the viewpoint of its usefulness to engineering students and practicing engineers who are not specialists in civil engineering. The author discusses the basic principles of surveying and the techniques which are most often needed by engineers. Particular attention is given to operations such as the mapping of small areas, the laying out of building projects, and the setting up of heavy machinery in industrial plants. About one-third of the volume is devoted to tables of mathematical and surveying reference data.

MITCHELL HUGH CHESTER

Definitions of terms used in geodetic and other surveys Washington D C. Government Printing Office, 1948 87 p. 25 cm. (United States. Coast and Geodetic Survey Special publication no 242) Paper $0 45 1592

Note: A glossary of geodetic and other surveying terms. Work on the publication was begun by the Federal Board of Surveys and Maps in 19[illegible] and concluded, after the abolition of that Board in 1942 in the Division of Geodesy of the U S. Coast and Geodetic Survey For each term there is a basic definition or description containing the elements essential to a complete and accurate definition or description. For many terms there are also given, in separate paragraphs, supplementary statements designed to facilitate the interpretation of the basic definition and to call attention to other uses that may have been made of the terms defined.

MITCHELL, HUGH CHESTER, AND LANSING G SIMMONS

The state coordinate systems (a manual for surveyors) Washington, D C Government Printing Office, 1945 62 p illus. 25 cm. (United States. Coast and Geodetic Survey Special publication no 235) Paper $0.35 1593

Contents (abridged) Introduction Establishment of the state coordinate systems. State systems approved by Federal bureaus Chapter 1, The state coordinate systems: Terms and definitions. Geodetic and plane-coordinate positions. Map projections and state grids. Chapter 2 Surveys and plane-rectangular coordinates: Position of origin and signs of coordinates Azimuths preferred to bearings. Difference between geodetic and grid azimuths Convergence of meridians. Plane coordinates and city surveys State grid zones. Local systems of coordinates Ground lengths reduced to sea level Sea-level lengths reduced to grid lengths Combination factors: reduction to sea level and grid. Characteristics and length reductions. Accuracy of sea-level reductions Chapter 3 The land survey: Planning the survey The field work. The office work. Land area. Lost and obliterated corners. Description by coordinates. Bibliography Appendices Table of the state coordinate systems. Formulas and tables. Index.

Note. This manual is designed to aid the surveyor who intends to use a state coordinate system for referencing a land or engineering survey in order that its results may be placed on a lasting basis by coordination with surveys in other areas. The state coordinate systems are described, and procedures which their use involves are explained and exemplified by carrying through the computation of a land survey The publication does not attempt to go beyond plane surveying

RAPPLEYE, HOWARD SNYDER

Manual of levelling computation and adjustment. Washington D C. Government Printing Office 1948 178 p. illus. 25 cm. (United States. Coast and Geodetic Survey Special publication no 240) Paper $0 75 1594

Contents: Introduction. Notation. Material received from the field Preliminary processing by the Section of Field Records. Preliminary computations. Junction details. Combination computations. Adjustment of leveling. Distribution of corrections. Computation of adjusted elevations. Final check on summary sheets. Tables. Appendix: Resolution of the International Geodetic Association. Resolutions of the International Association of Geodesy Orthometric and dynamic corrections. Development of circuit-reduction method. Application of circuit-reduction method to networks including inner circuits having no fixed points. Index.

Note: (457) Geodetic leveling parties of the Coast and Geodetic Survey operating under special instructions issued for each project, carry on the field work of running line of first or second-order levels. The field work is done in accordance with the provisions of the General Instructions for Geodetic Leveling set forth in Special publication no. 239 *Manual of geodetic leveling* As that manual amplifies and explains the General Instructions and is the guide for the geodetic leveling parties in the field, this manual is the guide for the office personnel engaged in processing the data received from the field. It supplants Part II, Office computations, of Special publication no. 140, *Manual of first-order leveling*, by Henry G. Avers, first published in 1929 and reprinted with supplement in 19[illegible], 1939 and 19[illegible]

TRACY JOHN CLAYTON

Surveying theory and practice. New York John Wiley & Sons Inc., 1947 1279 p illus. 20 cm. $7 50 1595

Contents (abridged) Part I, Field work Fundamental definitions and concepts. Linear measurements. Basic problems in chaining. Use of the level and the leveling rod Leveling to establish grade points. Precise differential leveling. Bearings and azimuths. Compass surveying. Use of the transit. Transit surveying—methods of running traverses. Triangulation. Stadia surveying. Plane-table surveying. Topographic surveying. Vertical curves. Horizontal curves Determination of the meridian. Part II, Office work: Office computations—general directions and suggestions. Calculation of bearings and azimuths. Calculation of omitted measurements. Calculation of areas. Subdivision of land. Earthwork computations. Draftingroom methods. Methods of plotting angles. Methods of plotting traverses. Plotting the map. Profiles and cross sections. Part III, Surveying instruments: Introduction. Chains, tapes, and rods. Transits, levels, plane tables, surveyor's compass, sextant. The care of instruments. Part IV Standard surveys: Horizontal control surveys. Surveys for construction. Surveys of land boundaries. United States public-land survey Aerial photographic surveys. Tables. Index.

Note Tracy's *Plane surveying* has been a standard instruction and reference book since its original publication in 1907 This new title represents an extensive revision and expansion of the older work. The purpose—that of providing a comprehensive text for students and a reference handbook for practical use in the field and office—is still the same, but the work has been brought up to date and a good deal of new material added.

PHOTOGRAMMETRY AND CARTOGRAPHY

ADAMS OSCAR SHERMAN

General theory of equivalent projections Washington, D C. Government Printing Office, 1945 74 p illus 25 cm. (United States. Coast and Geodetic Survey Special publication no 236) Paper $0.30 1596

Contents Reduction of the spheroid to the sphere. Distortion in length and angle. Examples of one coordinate as an arbitrary function. Projections with circular parallels. Lambert's azimuthal equivalent projection. Bonne's projection. Albers equal-area projection. Proposed new projection Determination of the axes of the Tissot indicatrix. Determination of the directions of the axes Example of the indicatrix. Hammer-Aitoff projection. Curves of true scale on equivalent projections. The Lambert azimuthal, equal area, polar projection. Tables: Transformation from geographic to azimuthal coordinates on the authalic sphere—center on the Equator Values of the azimuth reckoned from the north. Values of the great circle distance from the center Functions of authalic latitude for map of

world on proposed equal-area projection. Table for an equivalent projection with Lambert, azimuthal, meridional, projection spacing on the central meridian and straight line parallels.

Note. A mathematical treatise on the general principles underlying all projections in which the area is preserved in constant ratio throughout the map in all its parts. Such projections are also called equal-area and sometimes authalic. The publication will be of interest to those concerned with the technical aspects of map projection. Some knowledge of mathematical analysis is necessary to an understanding of its contents.

BRANCH MELVILLE CAMPBELL, JR.

Aerial photography in urban planning and research. (Illustrated by the author) Cambridge Harvard University Press 1948 150 p illus. 28 cm. (Harvard city planning studies, XIV) $3 00 1597

Contents (abridged) Part I: The use of aerial photographs for urban planning and research. Vertical stereophotographs. Oblique photographs. Photographic mapping. Cost of aerial surveys. Part II: Special knowledge prerequisite to the effective use of air photos for urban planning and research. Photogrammetry and plotting. Photo mosaics. Flight planning. Photographic quality. Cameras and film. Night photographs. Photographic interpretation. Notes. Index.

Note A comprehensive study of actual and potential uses of aerial photographs in not only city planning but also in the regular work of local government units. An example of the latter is the use of such photographs in making tax and assessment maps. In the first part of the volume the various types of aerial photographs, their characteristics and uses, are discussed. In the second part the technical processes of making aerial photographs, assembling them into maps or mosaics, and interpreting the finished product are covered in adequate detail

CHURCH, EARL FRANK AND ALFRED O QUINN

Elements of photogrammetry Syracuse Syracuse University Press 1948 120 p. illus. 24 cm. $3 00 1598

Contents Part I, Fundamental principles: Introduction. Fundamental principles of aerial photogrammetry. Control of photogrammetric work. Photographic interpretation. Application of the fundamental principles to practical problems in photogrammetry. Part II, Practical mapping methods: Stereocomparagraph and contour finder technique. Planimetric map compilation based upon radial line plotting. Mosaics. Topographic mapping with the multiplex projector. Oblique photographs. Tri-metrogon method for reconnaissance mapping.

Note (1377) A brief review of the fundamental principles and methods of photogrammetry written for an introductory college course. Particular attention is given to the operation and use of various instruments used in the construction of aerial maps. The book is a revision of Earl Church's *Elements of aerial photogrammetry* Syracuse, 1944 and now includes brief chapters on the history of photogrammetry, control of photogrammetric work, and photographic interpretation.

RAISZ ERWIN

General cartography Second edition. New York McGraw Hill Book Company Inc., 1948 354 p illus. 26 cm. (McGraw Hill series in geography V C Finch, consulting editor) $6.00 1599

Contents: Book One, General cartography Part I, The history of maps. Part II, Scales and projections. Part III, Representation of the earth's pattern on maps. Part IV Lettering, composition, and drafting of maps. Book Two, Special cartography: Part V Surveying on the ground and from the air. Part VI, Official and professional maps. Part VII, Cartographic specialties. Part VIII, Science maps. Appendix. Index

Note (1333a) This well-written and comprehensive text on the science of map-making is intended primarily for use in college courses, but its readable style will also appeal to the interested layman. It is concerned, not so much with the actual techniques of map-making, as with the fundamental principles and problems of the art of mapping. The broad scope of the earlier edition has been further augmented by the addition of new chapters on ground and aerial surveying. Map projections and military maps are discussed at greater length, and the bibliography has been revised and brought up to date.

TALLEY, BENJAMIN BRANCHE, AND PAUL H ROBBINS

Photographic surveying. New York Pitman Publishing Corporation 1945 223 p illus. 24 cm. $3 00 1600

Contents Introduction to photographic surveying. The photograph. Terrestrial photogrammetry. Photographic equipment. Interpretation of aerial photographs. Planning the photographic flight. Image displacements. Control and its extension. Compilation of detail. Principles of stereoscopy. Stereoscopic plotting instruments. Mosaics from aerial photographs. Plotting from oblique photographs. Applications of photographic surveying. Tables of stereoscopic parallax. Index.

Note A short introductory text in the subject designed primarily for use in college courses offered to civil engineering students, but suitable also for graduate engineers who desire a review of the fundamental techniques. The principles are explained and typical mapping cameras are described. Methods of preparing various types of maps from aerial photographs are explained in considerable detail. The chapter on applications describes many interesting uses of photographic surveying in connection with mineral rights, taxation, soil surveys, forestry and regional planning.

STRESS ANALYSIS AND THEORY OF STRUCTURES

CISSEL, JAMES HARLAN

Stress analysis and design of elementary structures. Second edition. New York John Wiley & Sons Inc. 1948 419 p illus. 23 cm. $5 00 1601

Contents: Part I, Stress analysis: Introduction—Definitions. External forces—Loads. Graphic statics. Reactions—Shear—Bending moment. Restrained and continuous beams. Trusses. Stability of masonry structures and foundations. Part II, Design of simple structures: Structural fastenings and connections. Timber beams and columns. Steel tension members, columns, beams, and girders. Light gage steel construction. Reinforced concrete beams, slabs, and columns. Appendix. Index.

Note (1190) The author who is Professor of Structural Engineering at the University of Michigan intends this volume as an introductory exposition for the instruction of general engineering classes. It presupposes an elementary knowledge of statics and strength of materials. Part I is virtually unchanged from the first edition (1940) while Part II shows considerable revision and many new pages of problems have been added throughout the text. The chapter on light-gage steel construction is new and newly added tables of standards, properties, sizes, and other material specifications appear in the appendix.

FROCHT MAX MARK

Photoelasticity Volume II. New York John Wiley & Sons Inc., 1948 505 p illus. 23 cm. $10 00 1602

Contents: The compatibility equation and elementary stress functions in two dimensions. Radial stresses in the semi-infinite plate. Radial stresses in wedges and beams. The circular disk. Concentrated load on an infinite plate. The influence of the material on stress distribution. Lateral extensometers and isopachic curves. The numerical solution of Laplace's equation. Conformal transformations, the use of polar and bipolar coordinates in harmonization. The stress-optic law in three dimensions. Three-dimensional techniques. Applications of oblique incidence and of rotational effects. Circular shafts in torsion and bending. Scattered and convergent light. Appendix: Fosterite—a new material for three-dimensional photoelasticity. Index of names. Subject index.

Note (1421) Volume I of this set, published in 1941 served as an introduction to the subject and described basic methods of analysis which were purely optical. The present volume, which is not limited to methods requiring transparent models, develops the theories and practices presented in the earlier volume, with emphasis on new work carried out since 1941. It introduces the theory of elasticity, describes methods for determining the sums of principal stresses at isolated points, and discusses the theory, techniques, and applications of three-dimensional photoelasticity. Numerous stress

diagrams and strain-pattern photographs are provided. The treatment is intensely mathematical and is intended for graduate engineers and advanced students.

HETÉNYI, MIKLÓS IMRE

Beams on elastic foundation theory with applications in the fields of civil and mechanical engineering. Ann Arbor The University of Michigan Press, 1946 255 p illus. 26 cm. $4.50 1603

Contents: General solution of the elastic line. Beams of unlimited length. Beams of finite length. Particular cases of loading on finite beams. Beams of variable flexural rigidity and variable modulus of foundation. Straight bars under simultaneous axial and transverse loading. Elastic stability of straight bars. Torsion of bars. Circular arches. Continuity in the foundation. Tables.

Note: This book is probably the most comprehensive treatment of the analysis of beams supported on elastic foundations. Although some theory and technique have been taken over from the older literature on the subject, the greater part of the material, including number of useful formulas, is original. Occasional practical applications are introduced into the text, but the emphasis is on theory

LAURSON PHILIP GUSTAVE, AND WILLIAM JUNKIN COX

Mechanics of materials. Second edition. New York John Wiley & Sons Inc., 1947 422 p illus. 22 cm. $4 00 1604

Contents: Stress and deformation. Mechanical properties of materials. Allowable stresses. Stresses due to axial loads. Riveted and welded joints. Torsional stress, shafts, and helical springs. Beams—shear and bending moment. Stresses in beams. Design of beams. The deflection of statically determinate beams. Restrained beams. Direct stresses combined with bending. Columns with axial loads. Columns with eccentric loads. Combined stresses. Elastic energy; stresses produced by moving bodies. Continuous beams. Beams of two materials. Beams (additional topics). Thick-walled cylinders subject to internal and external pressure. *Eccentrically loaded connections.* Comprehensive problems. Centroids of areas. The moment of inertia of plane area. Tables. Index.

Note: (1316) An engineering college textbook designed for use in introductory courses in the mechanics of materials (strength of materials) The first fifteen chapters are well integrated study of basic principles; the remaining chapters contain slightly more advanced, more specialized material. The discussions are relatively full, and many worked examples are included There are also 829 problems for students to solve. Major changes evident in the present edition include re-setting of the type for the entire book, the addition of four new tables of data, and extensive revisions of four chapters.

MARIN, JOSEPH

Strength of materials New York The Macmillan Company 1948 464 p. illus. 24 cm. $4 75 1605

Contents: Part I, Simple stresses: Members subjected to simple tension and compression. Members subjected to shear and torsion. Members subjected to bending—beams. Members subjected to axial and bending loads—short members. Members subjected to axial and bending loads—long members or columns. Part II, Combined stresses: *Members subjected to combined stresses—determination of stresses.* Members subjected to combined stresses—theories of failure and design. Part III, Statically indeterminate stresses: Deformation methods of analysis. Energy methods of analysis. Part IV Special topics: Riveted and welded joints. Special problems on bending of beams. Members subjected to fatigue and impact loads. Appendix Centroids and moments of inertia of plane areas. Appendix II: Tables of physical properties and design stresses for common engineering materials. Index.

Note: This elementary text on stress analysis for engineering students deals with the behavior of structural members under varying conditions of strain and stress. It describes the methods used to ascertain the extent of stress imposed, and to determine the dimensions of the member required to meet given load. Although the theory of the subject is emphasized, it is closely integrated with discussions of practical problems in design. Illustrative problems and review exercises are included in each chapter. The drawings and diagrams, in fact the whole format of the book, are exceptionally good.

MAUGH, LAWRENCE CARNAHAN

Statically indeterminate structures. New York John Wiley & Sons Inc., 1946 338 p. illus. 23 cm. $5.00 1606

Contents Classification and description of statically indeterminate structures. Fundamental principles of structural mechanics. Continuous beams and frames with straight prismatic members. Building frames subjected to vertical loads. Continuous frames with joints having different linear displacements. Continuous girders and frames with variable moment of inertia. Continuous trusses and bents. Elastic arches, rings, and frames with curved members. Flexible members. Special problems in statically indeterminate structures. Appendix. Index

Note: Teaching material developed for use in senior and graduate engineering courses at the University of Michigan forms the basis of this work. Statically indeterminate structures are described and classified, and the fundamental principles of structural mechanics are explained. Emphasis is placed on solving problems by methods of successive approximations. Selected references to related literature and group of problems for the student to solve are appended to each chapter. The author is Associate Professor of Engineering at Michigan.

MURPHY, GLENN

Advanced mechanics of materials. New York McGraw Hill Book Company Inc., 1946 307 p. illus. 24 cm. $4.25 1607

Contents: Relationship of materials to design. Stresses and strains at point. Stress-strain relationships. Theories of failure. Axial loading. Cylinders, spheres, and disks under radially symmetrical loads. Torsion. Flexure. Cross shear Introduction to photoelastic analysis. Compressive loads and buckling. Answers to problems. Author index. Subject index.

Note: Primarily this book is text in stress analysis for use in advanced engineering courses. The treatment is largely theoretical and requires sound background of mathematics and knowledge of the strength and properties of materials. Practical applications of the subject are illustrated by the numerous problems given at the end of each chapter The book will also be of some use to practicing structural designers and engineers, for its treatment of numerous special design problems—for example, torsional stresses in thin-walled closed sections—which are accompanied in most cases by references to fuller treatments in other publications.

PARKER, HARRY

Simplified design of structural steel. New York John Wiley & Sons Inc. 1945 226 p illus. 20 cm. $3.25 1608

Contents: Structural sections. Unit stresses Reactions, moments, and shear Bending stresses; properties of sections. Design of beams. Floor framing. Riveted connections. Welded connections Plate girders Columns. Miscellaneous structural elements. Index.

Note. The concise and clear presentation in this useful text and reference book makes it suitable for either classroom use or home study. The properties of the common structural steel shapes such as I-beams, channels, wide-flange sections, and angles are described and tabulated; then the reader is shown simple methods of computing bending moments, shear, deflection, moments of inertia, and safety factor in structural steel building members. Much of the space is devoted to worked examples and illustrative problems, for the solution of which only arithmetic and high school algebra are required.

SEELY FRED B

Resistance of materials. Third edition. New York John Wiley & Sons Inc., 1947 486 p illus. 22 cm. $4 00 1609

Contents (abridged) Part I, Elementary topics: Stress and strain. Thin-walled cylinders and spheres Riveted and welded joints. Stress and strain caused by torsional loads. Transverse loads. Deflection of beams. Combined axial and bending loads. Eccentric loads. Compression members Repeated loads Fatigue of metals. Impact and energy loads. Part II, Special topics. Conjugate-beam method. Statically determinate beams. Statically indeterminate beams. Unsymmetrical bending. Curved flexural members. Flat plates. Thick-walled cylinders. Torsional resistance of bars having noncircular cross sec-

tions. Reinforced-concrete beams. Elastic vibration of load-resisting members. Appendices. Index.

Note An introductory mechanics textbook which deals with the relationship between loads acting on structural members and the resulting stresses and deformations. It clearly describes the theory involved gives practical methods for analyzing and determining stresses; and shows how to design beams and columns to satisfy given loadings. Although the text has been reset in this edition, revision of its contents has been slight, consisting mainly in the addition of the short chapter on elastic vibrations of load-resisting members, modernizing of the information on columns, and the inclusion of more problems. Integral calculus is freely used for explanations and the derivation of fundamental formulas, and is required for the solution of many of the problems.

SOKOLNIKOFF, IVAN STEPHEN

Mathematical theory of elasticity with the collaboration of R. D Specht. New York McGraw Hill Book Company Inc. 1946 373 p illus 23 cm. $4 50 1610

Contents (abridged) Analysis of strain Affine transformation. Infinitesimal affine deformation. Strain quadric of Cauchy General infinitesimal deformation. Finite deformations. Analysis of stress Equations of equilibrium. Stress quadric of Cauchy Maximum normal and shear stresses. Stress-strain relations: Generalized Hooke's law Equilibrium equations for an isotropic elastic solid. Uniqueness of solution of the boundary-value problems of elasticity Extension, torsion, and flexure of homogeneous beams Summary of some results of the complex variable theory Theorem of Harnack. Formulas of Schwarz and Poisson. Solution of the torsion problem by means of conformal mapping. Variational methods. Variational problem and Euler' equation. Theorems of work and reciprocity The Rayleigh-Ritz method. Galerkin method. The error function. Estimates of error in the minimal integral and the stress function for torsion. Appendix Summary of formulas. Author index. Subject index.

Note. Originating in series of lectures in the Program of Advanced Instruction and Research in Mechanics, Brown University this volume is designed for the advanced engineering and mathematics student, the physicist, and the design engineer Tensor notation is used freely to achieve compactness and clarity of treatment.

TIMOSHENKO STEPHEN AND D H YOUNG

Theory of structures. New York McGraw Hill Book Company Inc. 1945 488 p illus 23 cm. $5 00 1611

Contents Elements of plane statics Statically determinate plane trusses Influence lines. Statically determinate space structures. General theories relating to elastic systems. Deflection on pin-jointed trusses. Statically indeterminate pin-jointed trusses. Beams and frames. Arches Index.

Note A well written textbook for engineering college students. The authors have taken special pains to demonstrate the relationships between mechanics and structural analysis. Problems for the student to solve are included.

VAN DEN BROEK, JOHN ABRAHAM

Theory of limit design New York John Wiley & Sons, Inc. 1948 144 p illus. 22 cm. $3 50 1612

Contents: Physical properties of metals Limit design of simple structures. Limit design of redundant beams Limit design of trusses. Connection details. Evaluation of limit design. References Problems. Index.

Note Limit design is method of structural analysis which aims at ascertaining the permissible safe deformations in given structure, or in establishing the limits within which failure is practically certain not to occur In this compact volume the author has drawn upon his own research and experience to outline the procedures of such method and its underlying theory Particular attention is given to the ductile characteristics of metals, and numerous graphical representations of the stress strain relationship of various metals and structural members are included.

WEXLER, ARNOLD AND OTHERS

Structural properties of prefabricated plywood lightweight constructions for walls partitions, floors and roofs sponsored by the Douglas Fir Plywood Association, by Arnold Wexler Sanford B Newman and Vincent B Phelan, with the collaboration of R. F Luxford, Forest Products Laboratory Forest Service United States Department of Agriculture. Washington D C. Government Printing Office, 1945 48 p illus 26 cm. (United States National Bureau of Standards. Building materials and structures report BMS 104) Paper $0.30 1613

Contents: Introduction. Part 1 Lightweight construction Sponsor and product. Specimens and tests. Materials. Wall DV Partition DW Floor DX. Floor DY Floor DYa. Roof DZ. Roof DZa. Additional comments by sponsor Part 2 Commercial type construction Sponsor and product. Specimens and tests. Materials. Wall EA. Wall EAa. Wall EAA. Additional comments by the sponsor.

Note One of series on the structural properties of constructions intended for low-cost houses and apartments, this report covers the load-deformation relations and strength of the elements in prefabricated plywood constructions been subjected to compressive, transverse, concentrated, impact, and racking loads by standardized methods simulating the loads to which the elements would be subjected in actual service. The sponsor as in others in the series, designed the constructions and described the materials and methods of manufacture. The Bureau of Standards tested the specimens and prepared the report, which is intended for the use of architects and engineers concerned with determining whether given construction meets desired performance requirements.

WILBUR, JOHN BENSON, AND CHARLES HEAD NORRIS

Elementary structural analysis New York McGraw Hill Book Company Inc. 1948 523 p illus 23 cm. $6 00 1614

Contents Introduction. Reactions. Shear and bending moment. Trusses. Graphic statics. Influence lines. Bridge and roof trusses. Long-span structures Three-dimensional frameworks. Gravity structures. Cables Approximate analysis of statically indeterminate structures Deflections of structures. Stress analysis of indeterminate structures Influence lines for statically indeterminate structures. Other structures. Model analysis of structures. Model methods of stress analysis. Other uses of structural models. Index.

Note. In this text for undergraduate civil engineering students the emphasis is placed on methods of stress analysis, and only brief mention is made of the principles of design. Throughout the book the illustrative material is drawn entirely from civil engineering structures, but the methods discussed and principles involved are applicable to structures whose design falls within the scope of other branches of engineering. In spite of its predominantly textual nature, the volume will also be of value as reference tool for practicing engineers. The authors are members of the faculty of Massachusetts Institute of Technology

WILLIAMS CLIFFORD DAVID

Analysis of statically indeterminate structures. Second edition. Scranton Pa. International Textbook Company 1946 331 p. illus. 21 cm. $6 00 1615

Contents Slope and deflection of beams. Slope and deflection of trusses. Beams. Single-span frames and arches Slope deflection. Moment distribution. Continuous and redundant trusses. Secondary stresses in trusses Columns. Column analogy Index.

Note (1419) Although the subject of indeterminate structures is ordinarily of graduate level, this book has been written for undergraduate engineering students It stresses the application and simplicity of basic principles, and by means of many carefully chosen problems attempts to develop in the student an independent analytical ability Completed coursework in integral calculus, applied mechanics, and the stress analysis of determinate structures are prerequisites. Guided by classroom experience, the author has revised the second edition to include new chapter on column analogy which describes computation arrangement useful in analyzing many types of indeterminate structures, and new material on using the method of work for the analysis of beams.

CONCRETE CONSTRUCTION

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on measurement of entrained air in concrete. Fiftieth annual meeting American Society for Testing Materials At lantic City N J., June 16–20 1947 Philadelphia American Society for Testing Materials 1947 96 p illus 23 cm. (Reprint, American Society for Testing Materials. Proceedings Vol. 47, 1947) Paper $1 75 1616

Contents: Introduction, by A. T Goldbeck. Procedures for determining the air content of freshly-mixed concrete by the rolling and pressure methods, by C. A. Menzel. Indiana method for measuring entrained air in fresh concrete, by P D. Miesenhelder. The measurement of air entrained in concrete, by J. H. Swanberg and T W Thomas. Comparison of three methods of measuring air entrainment in concrete, by A. Klein, D. Pirtz, and C. B. Schweizer. Measurement of air contents of concrete by the pressure method, by H. W Russell. Analysis of methods of measuring entrained air in concrete, by W A. Cordon and H. W Brewer. The pycnometer method for determining entrained air in concrete, by J C. Pearson. The Ohio method of determining the amount of air entrained in Portland cement concrete, by J. F Barbee. General discussion. The effect of sampling errors on unit weight and air determinations in concrete, by J C. Pearson and S. B. Helms.

Note: A collection of papers addressed to engineers on various methods that have been developed for the measurement of air in air-entrained concrete mixes.

DALZELL JAMES RALPH, AND GILBERT TOWNSEND

Masonry simplified illustrations by Arthur E. Burke. Chicago American Technical Society 1948 2 v illus 22 cm. Vol. I, $4.50 Vol. II, $5.00 1617

Contents: Volume I, Tools, materials, practice: Lime, its manufacture and application. Mortar types, properties, and uses. Concrete characteristics and mixing. Blueprint reading. Concrete masonry Structural clay tile. Brick masonry Masonry sidewalks, driveways, floors, and steps. Index. Volume II, Practical construction Building forms for concrete. Design and construction of footings. Foundations and waterproofing. Beams and lintels and their use. Column design and construction. Chimneys and their construction. Fireplace design and construction. Walls and partitions Septic tank systems. Index.

Note: A practical, very elementary text suitable for self instruction and for use in vocational school courses It will be of some use also to home mechanics who undertake jobs in masonry about their own homes. It is written in simple language, the chapters are broken up into short units that are easily comprehended and there is an abundance of illustrative matter most of it being reproductions of perspective drawings. The two volumes form a set, but each may be used independently of the other.

PEABODY, DEAN

The design of reinforced concrete structures. Second edition. New York John Wiley & Sons Inc., 1946 532 p illus. 22 cm. $5.50 1618

Contents: General principles Rectangular beams. Slabs with one-way steel. Shear bond, anchorage, and diagonal tension. Rectangular beam design. Rectangular beams reinforced with tension and compression steel. The beams. Deflection and torsion. Shrinkage, flow and prestress Two-way and flat slabs Columns. Footings and retaining walls. The reinforced concrete structure. The structure as rigid frame Arches and rigid frame bridges. Appendix. Index.

Note. (3454) The first edition was prepared for use in a course given at the Massachusetts Institute of Technology The special feature of the book is that the discussion has been purposely made full so that the student will not have to take notes while listening to lectures. This fullness of treatment makes the book suitable also for home study and for use as a reference book A number of important changes have been made in this edition. A plastic theory of design is presented as an alternative to older theory New material has been added on prestressed concrete, and on the design of forms. Discussions and designs have been revised to conform to the American Concrete Institute's *Building regulations for reinforced concrete*, Detroit, 1941, or the Joint Committee on Standard Specifications for Concrete and Reinforced Concrete's *Recommended practice and standard specifications*, Detroit, 1941.

PORTLAND CEMENT ASSOCIATION

Continuity in concrete building frames. Practical analysis for vertical load and wind pressure. Third edition. Chicago, Ill. Portland Cement Association 1946 55 p illus. 23 cm. Paper Gratis. Distribution limited to the United States and Canada. 1618a

Contents (abridged) Vertical load Determination of fixed end moments. Tables of stiffness for beams and columns. Moment distribution at one joint Limitations in two-cycle moment distribution. Maximum and minimum moments at mid-span. Shear in continuous beams. Proportioning of reinforcement in beams. Effect of variation in stiffness. Haunched beams. Bending in columns. Determination of column moments. Proportioning of column section. Wind pressure: Concentric and eccentric wind pressure on building. Warping of floors. List of tables, vertical load: Moments in beams with fixed ends. Stiffness of beams. Stiffness of columns. Moment coefficients for slabs and joists.

Note: A presentation of a very condensed form of procedure for the analysis of continuous frames by moment distribution. It has particular application to ordinary building frames, and it enables their design to be accomplished with fewer calculations than if the usual full procedure is followed through. Significant changes have been made in the present edition, especially in the treatment of columns.

SOIL MECHANICS

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on load tests of bearing capacity of soils. Fiftieth annual meeting, American Society for Testing Materials, Atlantic City N J., June 16–20 1947 Philadelphia American Society for Testing Materials, 1948 148 p illus. 23 cm. (Special technical publication no 79) Paper $3 00 1619

Contents: Introduction to symposium, by W S. Housel Final report of the symposium committee. Field loading tests for the evaluation of the wheel load capacities of airport pavements, by L. A. Palmer Methods of testing soils for runways and foundations, by K. E. Bodye, W D. Kelley and S. D. Taylor Use of load tests in the design of flexible pavements, by W H. Campen and J. R. Smith. Field bearing tests applied to pavement design, by K. R. Philippe. A cyclic load-test procedure, by J E. Hittle and W H. Goetz. A Canadian investigation of load testing applied to pavement design, by N. W McLeod. General discussion.

Note Under the impetus of World War II, load-test measurement of the bearing capacities of soils, particularly in relation to airport construction, became an increasingly important engineering practice. This pamphlet brings together the most recent information on load-testing procedures, methods of analysis, and means of applying test results in the design of pavements. A general bibliography of seventy-six entries is provided in addition to the references cited by individual authors.

KRYNINE DIMITRI PAVLOVITCH

Soil mechanics its principles and structural applications. Second edition. New York McGraw Hill Book Company Inc., 1947 511 p illus. 23 cm. $5.50 1620

Contents: Part I, Elements of soil physics: Origin and general characteristics of soils. Soil moisture—and plasticity and consistency Seepage phenomena and frost action in soils. Part II, Elements of the mechanics of earth masses Stresses in earth masses. Shearing resistance and conditions of failure of an earth mass. Compression stresses—theory of consolidation. Review of parts one and two—and introduction to part three. Part III, Structural applications: Stability

of foundations. Stability of cuts and embankments. Stability of retaining walls and cofferdams. Pressure on tunnels and conduits. Highway and runway subgrades. Settlement of structures. Soil sampling and field soil testing. Appendices. Author index. Subject index.

Note (1470) Much of the literature on soil mechanics is too theoretical to be of use to the average engineering student or practicing civil engineer. This work is designed to interpret the theoretical knowledge in practical terms and, also, to describe established practices, some of which are not yet completely buttressed by laboratory data. Since the publication of the first edition in 1941 it has been used both as textbook in organized courses and as reference handbook by engineers. This edition has been rather extensively revised. The two chapters dealing with soil pressures on tunnels and culverts, and with highway and airport runway subgrades are new. Throughout the text, there are many smaller revisions. The reference lists have also been brought up to date.

TAYLOR, DONALD WOOD

Fundamentals of soil mechanics New York John Wiley & Sons Inc., 1948 700 p illus. 22 cm. $6.00 1621

Contents Introduction. Preliminary considerations. Simple soil tests and classification tests. Classifications. Subsurface investigations. Permeability. Weights, stresses and heads, seepage forces. Capillarity. Seepage. One-dimensional consolidation. Use of elastic theory for estimating stresses in soils. Settlement analysis. Strength theory. Shear testing methods, shearing characteristics of sands. Shearing strength of cohesive soils. Stability of slopes. Lateral pressures, stability of retaining walls. Soil mechanics considerations relative to dams. Action of shallow foundations, bearing capacity. Action of piles, pile foundations. References. Index.

Note The same publisher has now made available Terzaghi's *Theoretical soil mechanics*, 1943; Terzaghi's and Peck's *Soil mechanics in engineering practice* (see below); and the present title. This new addition to the literature is written by an Associate Professor of Soil Mechanics at the Massachusetts Institute of Technology and is specifically designed for use in courses offered to graduate engineering students. It contains less extensive treatment of theory than Terzaghi's book published in 1943 and is not so full on the practical aspects as the work by Terzaghi and Peck. It does, however offer different treatments of many topics, hence parts of it should be of interest to engineers

TERZAGHI KARL AND RALPH B PECK

Soil mechanics in engineering practice. New York John Wiley & Sons Inc. 1948 566 p illus. 23 cm. $5 50 1622

Contents Part A, Physical properties of soils Index properties of soils. Hydraulic and mechanical properties of soils. Drainage of soils. Part B, Theoretical soil mechanics Plastic equilibrium in soils Settlement and contact pressure. Hydraulics of soils Part C, Problems of design and construction Soil exploration. Earth pressure and stability of slopes Foundations. Settlement due to exceptional causes. Appendix Miscellaneous problems of design and construction. Index.

Note: The senior author's *Theoretical soil mechanics* (Wiley 1943) is well known as major contribution to the current knowledge of soil mechanics. It is, however too theoretical and mathematical for the typical practicing engineer In this new work the treatment is less mathematical, and the emphasis has been shifted to the practical analysis and solution of soil problems encountered in building. Nevertheless, approximately half of the book deals with general principles and phenomena; it is only in Part C that such structures as retaining walls, embankments, earth dams, footings, and the causes of settling are considered. Highway airport and tunnel problems are not discussed specifically but much of the material is applicable to them.

BUILDING

ALLER PAUL AND DORIS ALLER

Build your own adobe. Stanford University Calif Stanford University Press 1946 110 p. illus. (part col d) 28 cm. $3.00 1623

Contents Building with adobe Making bricks for the adobe house Planning the adobe house. Foundations for the adobe house Laying the walls of the adobe house. Roofing the adobe house Plumbing in the adobe house. Electric wiring in the adobe house. Finishing the adobe house. Owning the adobe house.

Note An account of the actual building of an adobe house by the authors who were inexperienced in building. The whole course of events is described from their learning that adobe could be made waterproof by the addition of bitumuls compound to the framing of the roof and partitions. Technical operations are described in detail and some are portrayed in the illustrations. The book is addressed to other persons who are interested in building their own houses.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

Steel construction, a manual for architects, engineers and fabricators of buildings and other steel structures. Fifth edition New York American Institute of Steel Construction 1946 432 p illus. 23 cm. $2.00 thumb-indexed $3 00 1624

Contents (abridged) Part I Rolled steel structural shapes Rolling mill practice. Miscellaneous data for designing and estimating Part II Estimating and detailing information Detailing practice. Standard beam connections. Separators, tie rods, and anchors. Field rivet and erection clearances. Pipe railing details. Rivet dimensions, weights, etc. Screw threads. Bolt and nut dimensions, weights, etc. Part III Allowable loads by A. I. S. C. specification. Part IV Standard specifications and codes: American Institute of Steel Construction. American Institute of Bolt, Nut and Rivet Manufacturers. American Society for Testing Materials. American Welding Society United States Department of Commerce. Part Miscellaneous data and mathematical tables. Index.

Note A widely used designers' and draftsman's handbook. Most of the changes in this edition had their origin in revised specifications and in changes in rolled shapes now being manufactured.

ARCHITECTURAL RECORD

Time-saver standards a manual of essential architectural data for architects, engineers, draftsmen builders and other technicians. New York The F W Dodge Corporation 1946 648 p 28 cm. $12 00 1624a

Contents (abridged) Architectural symbols. Dimensions of the human figure. Mathematics. Structural steel design. Reinforced concrete. Modular design data. Brick masonry. Windows. Fireplace design. Stairs. Residential furniture sizes. Household kitchens. Bathroom planning. Household closets. Apartment planning. Hotel bedrooms. Restaurant and bar design. Office and loft buildings. Retail shops. Bus terminal design. Community building planning. Jails. Hospitals School design. Recreation areas. Swimming pools. Housing site planning. Driveways. Basement waterproofing. Noise reduction. Theater acoustics. Heat transmission. Duct design. Air conditioning. Plumbing. Sewage disposal. Lighting. Telephone installation. Remodeling construction. Index.

Note: An exceptionally inclusive reference book of data useful to architects, draftsmen, and builders. Specific information is given on dimensions, planning and other architectural or engineering aspects of hundreds of building elements, types, techniques, etc. The material ranges in complexity from mere dimensioned outlines of household furniture to complete floor plans of hospitals. All of it has been published in the *Architectural record* over period of years and has been compiled into this volume for convenient use. There is good index.

BLAKE MARION ELIZABETH

Ancient Roman construction in Italy from the prehistoric period to Augustus, a chronological study based in part upon the material accumulated by the late Dr Esther Boise Van Deman. Washington D C. Carnegie Institution of Washington 1947 421 p illus. 29 cm. (Carnegie Institution of Washington. Publication 570) Paper $9.00 cloth, $10.00 1625

Contents List of plates. Selected bibliography and abbreviations. Types of evidence. Roman building materials. Stone walls in Italy Squared-stone construction in Rome and vicinity Arch and vault construction in cut-stone work. Opus incertum to opus reticulatum. Sun-dried and sand baked bricks. Brick and tile construction. Mortar

and similar mixtures. Concrete. Indexes: Sites other than Rome. Rome. Types of evidence. Materials used in building. Subjects.

Note. A carefully-documented, scholarly study. Although it is of primary interest to archaeologists, it is also valuable to students of the history of building and engineering. Detailed and precise information is presented on both building materials and methods of building.

BURBANK, NELSON L.

Practical job pointers. New York Simmons-Boardman Publishing Corporation 1947 211 p illus. 28 cm. $4.00. 1626

Contents: Tools—use and care of. Workbenches—attachments. Portable equipment. Excavations—foundations—forms. Sills—girders—joists—sub-flooring. Exterior wall construction—inside wall framing. Exterior wall covering. Roof construction—bay construction—roofing. Cornices—porches. Interior wall covering—interior trim. Steps—stair construction. Windows. Doors. Closets—shelves—built in equipment. Finished flooring. Painting—finishing. Screen repairing—screens. Sanitary equipment. Electrical wiring. Scaffolds—ladders—hoists. Garage doors. Short cuts in laying out work.

Note: (3417) The lineage of this book goes back through six editions, counting the present one and ignoring several changes in title. The first title, *Kinks for the builder* still aptly describes the book, although not any of the material in that first edition has been retained. It has been compiled from descriptions of short cuts, ingenious methods of building and repairing, and other useful "pointers" sent in by readers of the *American builder* and published in that periodical. It is of interest to practical workers in the building trades and to their brothers-in-spirit, if not in skill, the home mechanics and jacks-of-all-trades. The present edition has been made by adding to the material that appeared in the 1940 edition, 81 pages of new material, and by making a new index.

CRANE, THEODORE

Architectural construction the choice of structural design. New York John Wiley & Sons Inc. 1947 414 p illus. 25 cm. $6.00 1627

Contents: Building codes and design standards. Choosing the framing material. Planning the framing of a building. Choosing the structural floor system. Choosing the structural roof system. Wide-span designs. Choosing the wall assembly. Masonry walls. Choosing the type of foundation.

Note A useful departure from the majority of books on building construction, in that it deals primarily with the methods of selecting the type of construction to be used, as influenced by geographical location, site conditions, type of occupancy, equipment, and architectural design. The material is well presented and is written for students, architects, and architectural engineers. Each group will find the book particularly valuable for its descriptions of the important types of building construction now in use, and for its presentation of data regarding building specifications, fireproofing materials, heat transmission coefficients, sound insulation, allowable stresses, etc. Numerous photographs and diagrams illustrating construction details constitute an important feature.

CREAGER, WILLIAM PITCHER, AND OTHERS

Engineering for dams by William P Creager Joel D Justin, and Julian Hinds. New York John Wiley & Sons, Inc. 1945 3 v illus. 24 cm. Vol. I, $5 00 Vol. II, $6.50 Vol. III, $6.50 1628

Contents: Volume I, General design. Investigation of dam sites. The choice of type of dam. Preparation and protection of the foundation. Hydraulic model studies. Flood flows. Spillways. Volume II, Concrete dams: Forces acting on dams. Requirements for stability of gravity dams. General procedure for the design of gravity dams. The design of solid nonoverflow gravity dams. The design of solid spillway gravity dams. Internal stresses and stress concentrations in gravity dams. Arch dams. Buttressed concrete dams. Concrete for concrete dams. Volume III, Earth, rock-fill, steel, and timber dams: Soil tests and their utilization. Earth dams—general principles of design. Stability of earth dams. Details of earth dams. Rock-fill dams. Steel dams. Timber dams. Details and accessories. Headwater control.

Note: During recent years many large dams have been built, and dam building has become more of an exact science than formerly. *Engineering for dams* has been written in an effort to provide engineers and engineering students with an understanding of the modern dam design theory and practical construction methods. The treatment is detailed and includes abundant drawings and data tables which among other things show graphical stress analysis techniques, profiles and plans of typical dams, minor parts of dam structures, and hydrographic information. Photographs of dam construction equipment such as earth movers, and of some of the more important dams in the United States are given. Bibliographies are appended to some of the chapters, and the index in each volume covers all three volumes. The work is based in part on Creager's *Engineering for masonry dams*, second edition New York John Wiley & Sons, Inc., 1929 394 p., $4.00; and Justin's *Earth dam projects*, New York John Wiley & Sons, Inc., 1932 345 p., $5.50.

DIETZ ALBERT GEORGE HENRY

Dwelling house construction. New York D Van Nostrand Company, Inc. 1946 371 p illus 23 cm. (A technical series on building construction) $6 00 1629

Contents: Inspection of the site. Building layout. Excavation, sanitary systems. Foundations. Framing. Chimneys and fireplaces. Windows. Roofing and flashing. Cornices, gutters, leaders. Exterior finishes, water tables. Insulation. Lath and plaster; "Dry" walls. Interior finish. Hardware. Painting. Index.

Note: A compact manual of structural details and building methods currently used in constructing small dwelling houses in the United States. It covers only houses with wooden frames, hence houses with walls built of masonry units or solid masonry are not discussed but houses with masonry veneer walls are included. It is organized primarily as a textbook for college courses, but it is suitable also for home study and for reference. Concise discussions of specific topics are supplemented by many clear drawings and by model specification clauses, but there are no reference lists or guides to sources of additional information. The author is a member of the faculty of the Massachusetts Institute of Technology.

DUNHAM CLARENCE WHITING

Planning industrial structures. New York McGraw Hill Book Company Inc., 1948 481 p illus. 23 cm. $6.00 1630

Contents: General planning of structures. Exploration of the site. Daylighting industrial plants. Electric lighting and power. Ventilation. Roofs. Floors. Walls and partitions. Steel mill buildings. Multistory steel buildings. Concrete structures. Wooden structures. Foundations. Machinery foundations. Miscellaneous considerations and structures. Some lessons in structural planning. Index.

Note: The scope of this work is the planning and design of factory buildings and other industrial structures. It deals mainly with two aspects: the principles of planning so as to obtain a maximum of suitability to the operations that will be performed in the plant, and special points and "know-how" for which there is no space in the usual handbook. Design is carried only through the selection of materials and parts. Thus in the chapter on floors, there is information on types of floor construction and on special details, such as joints, but none on methods of calculating allowable spans, because the work is intended chiefly for engineers who are already well grounded in the theory of structures.

FICKES CLYDE F AND W ELLIS GROBEN

Building with logs. Washington D C. Government Printing Office, 1945 56 p illus. 23 cm. (United States, Department of Agriculture. Miscellaneous publication no 579) Paper $0 15 1631

Contents: Building the foundation. Preparing the logs. Dimensions of the building. Framing the corners. Door and window jambs. Floor joists. Laying the wall logs. Window and door openings. Window and door frames. Roof framing. Partitions. Flooring. Interior wood finishing. Calking. Chinking. Chinkless log-cabin construction. Hewing timbers. Fireplace framing. Oiling and painting. The finished structure. Furniture. Building plans. Additional information.

Note Issued by the United States Forest Service, this publication gives the basic principles needed for successful building with logs. It assumes that the reader is familiar with the ordinary frame building methods used where wood is the principal construction material. The illustrations include photographs of modern log buildings and building plans for four log residences. Plans are also given for furniture suitable for a log house.

HANSEN, HOWARD JAMES
Modern timber design. Second edition New York John Wiley & Sons Inc. 1948 312 p illus. 23 cm. $4.50 1632

Contents Characteristics and properties of wood Mechanical and related properties. Grading rules and working stresses. Mechanics of wood. Fastenings. Beams and columns. Wood trusses. Timber decks and bridges. Glued laminated construction. Plywood. Decay wood-destroying organisms, and preservatives. Appendixes. Index.

Note (1434) This college textbook has also proved useful to practicing engineers concerned with the design of wooden structures. It has been revised so as to conform with the National Lumber Manufacturers Association's *National design specification for stress grade lumber and its fastenings* (1944) Most chapters show some alterations, but the most extensively revised are the third and fifth two—those on mechanical properties and on mechanics—are new

HANSEN, HOWARD JAMES editor
Timber engineers' handbook. New York John Wiley & Sons Inc., 1948 882 p illus. 21 cm. $10.00 1633

Contents: Factors affecting strength. Grading rules and working stresses. Standard terms and abbreviations Sizes and properties of sections. Weights. Loadings Simple beams. Continuous beams. Trussed beams. Columns—Solid Spaced columns. Combined stresses. Fastening. Trusses Glued laminated construction. Plywood. Floor systems. Buildings Poles and piling. Protection and maintenance. Appendix Index.

Note Here are brought together in readily accessible form basic information and reference data of particular value to engineers concerned with the design of wooden structures Numerous diagrams and charts are used to illustrate and give data on deflections, for arches and details of construction. The appendix contains "Table of uniformly distributed loads" in which the following information is given for (1) nominal sizes of timber ranging from 2 in. × 3 in. to 24 in. × 40 in (2) fiber stresses ranging from 950 lb. to 2400 lb. per sq. in and (3) spans ranging from 3 ft. to 30 ft. *W* total load *H* maximum horizontal shear for load *W* *d*, maximum deflection for load *W*; *W* total load in pounds limited by deflection of 1/360 of span.

HAWKINS REGINALD ROBERT AND C H ABBE
New houses from old a guide to the planning and practice of house remodelling. New York McGraw Hill Book Company Inc. 1948 558 p illus 24 cm. $4 95 1634

Contents Remodel? New houses from old—some examples The chief types of house construction. How to judge house for remodeling Halls and stairs. Living rooms. Dining rooms. Kitchens. Bathrooms. Bedrooms. Closets and storage space. Basements How to do remodeling Masonry work. Foundations Chimneys and fireplaces. House framing. Roofs. Exterior walls Windows and doors. Interior walls and trim Floors. Painting and papering. Heating Insulation. Plumbing Water supply Sewage disposal Wiring and lighting Useful books and pamphlets. Addresses of organizations and publishers. Appendix Index.

Note About one-third of this book deals in non-technical language with the problems faced by anyone he plans to modernize dwelling house In this part are discussed the modern requirements for comfortable and efficient houses and how these requirements can be obtained by well-planned remodeling of constructed houses. The rest of the book is concise encyclopedic discussion of the building materials and techniques that are employed in house remodeling The work is addressed primarily to actual and prospective home-owners, but it contains much information that is also of value to amateur and professional building craftsmen. There are about 350 illustrations.

MERRILL, ANTHONY FRENCH
The rammed-earth house with an introduction by the Hon. Clinton P Anderson, Secretary of Agriculture. Illustrated. New York Harper & Brothers 1947 230 p illus. 21 cm. $2 50 1635

Contents (abridged) The history of rammed-earth from Hannibal to Hibben. The pros and cons—what can be done with earth and where the drawbacks lie. Designing for rammed-earth. Soil selection and preparation. Building the rammed-earth house. Soil-cement—rammed in place, rammed in blocks or puddled. Cement-water paints. The Bureau of Standard tests—a short description of the results of official strength comparisons of earth and standard building materials. Bibliography

Note A popular book on the use of rammed-earth (also known as *pisé de terre*) as building material for house walls. Soil-cement mixtures and soil asphalt mixtures are discussed, as well as natural soils. Although the book is intended for reading by persons without technical training, technical matters such as the framing of rammed-earth houses, the making of soil-cement bricks, etc. are discussed at some length. The book is both plea for wider use of rammed earth in house construction and manual for builders and potential home owners who wish to experiment with this type of wall construction. The assumption that the average man can build house of this material appears to underlie the author's discussion. The extensive bibliography includes references to both technical and non-technical literature.

PARKER, HARRY
Simplified design of structural timber New York John Wiley & Sons Inc., 1948 218 p. illus. 20 cm $3 25 1636

Contents: Characteristics and classifications of wood. Unit stresses. Working stresses for structural lumber Properties of sections. Bending moments and shear Shearing stresses in beams. Deflection of beams. Design of beams. Joists and rafters. Plank and laminated floors. Timber columns. Bolted joints. Timber connectors. Truss design. Combined bending and axial loading. Trussed beams. Design of purlins Compound beams. Stud walls. Index.

Note. A concise exposition of practical methods of designing wooden structural members such as are mentioned in the chapter titles. Like the other books in this author's "Simplified" series, the treatment assumes no previous education in structural design and is aimed at young architects, builders, and other persons whose work requires them to design buildings on sound engineering principles. It is organized so that it may be used as textbook in short courses, or as home-study book without the guidance of an instructor. Many worked examples are incorporated in the text there are also problems for the student to work.

PARKER HARRY
Simplified engineering for architects and builders Second edition New York John Wiley & Sons Inc., 1947 245 p. illus. 20 cm. $3 25 1637

Contents Section I, Principles of mechanics Direct stresses. Stresses with new names Lengthening and shortening of bars. Moments Reactions of beams Shear and bending moments. Theory of bending and properties of sections Section II, Timber construction. Section III, Steel construction. Section IV Reinforced concrete. Section Roof trusses.

Note. (1439) This useful work is intended to show architects, draftsmen, and builders how to design simple structural units such as beams, columns, floors, and roof trusses. Although it contains few tables, it is self instruction text rather than handbook Compared to the first edition (1938) the purpose and arrangement of the work are unchanged; but there are rather extensive and important changes in unit stresses, and in the tables and problems.

PORTLAND CEMENT ASSOCIATION
Handbook of frame constants Chicago Ill. Portland Cement Association 1947 31 p illus. 28 cm. Gratis, distribution limited to the United States and Canada. 1638

Note A tabulation of carry-over and stiffness factors and fixed end moment coefficients for uniform, concentrated and haunch loads. Figures are given for 640 members with straight haunches and 640 with parabolic haunches. The general equation for the variable moment of inertia for parabolic haunches is $I_x = I_c [1 + (1 - x/aL)^2]^r$ and for straight haunches $I_x = I_c [1 + (1 - x/aL)]^r$ The material will be of particular interest to bridge designers and other structural engineers.

PULVER, HARRY E.

Construction estimates and costs. Second edition. New York McGraw Hill Book Company Inc. 1947 653 p. illus. 23 cm. $6.00 1639

Contents: Estimating in general. Handling and transporting materials. Excavation. Piling and bracing. Concrete. Masonry. Dampproofing and waterproofing. Wood construction. Structural steel. Roofing and flashing. Lathing and plastering. Heating and air conditioning. Plumbing. Electrical work. Painting, papering, and glazing. Heavy machinery. Construction plant and equipment. Overhead and profit. Complete estimates. Approximate estimates. Construction management. Appendices. Diagrams. Index.

Note. A practical manual giving definite and detailed information on methods of estimating construction costs for large and small buildings, residences, and roads. In considering each aspect of job the following items are covered: quantities and costs of materials; labor-hours and costs; amount, kind and cost of equipment needed; items in the overhead and their costs; percentage of profit. Methods of preparing estimates both approximate and complete, of making computations, and of avoiding error are clearly set forth. Numerous tables and charts together with sample estimates illustrating details discussed in the text are included. The changes made in this edition, as compared to the first (1940) pertain almost entirely to changes in prices of material and wage rates.

SEELYE ELWYN EGGLESTON

Data book for civil engineers. New York John Wiley & Sons Inc., 1945–47 3 v illus Vol. I & II, 30 cm. Vol. III, 21 cm. Vol. I, $7.50 Vol. II $6 75 Vol. III, $4.50 1640

Contents: Volume I, Design Structural—general. Structural—concrete. Structural—steel. Structural—wood. Structural—plywood. Structural—foundations. Soils. Earthwork. Roads. Railroads. Airports. Bridges. Transmission towers. Dams. Docks and piers. Corrosion of metal. Athletic fields. Drainage. Drainage and sewerage. Sewage treatment. Waste disposal. Water supply. Water purification. Water distribution. Index. Volume II, Specifications and costs: Contract documents. Structural specifications. Airports, roads, and railroads. Bridges. Docks. Dams. Drainage, sewers, sewage treatment, and water. Costs. Glossary. Specifications index. Costs index. Volume III, Field practice: Part I, Inspection: Typical heavy construction equipment. Concrete. Masonry. Structural steel. Welding. Bridges. Painting. Foundations on soil. Pile driving. Timber. Ropes and cable—strengths. Varieties of knots. Soils. Aggregates. Grading. Bituminous paving. Sanitary construction. Pipe laying. Miscellaneous. Part II, Surveying: Topographic survey. Construction stakeouts. Circular curves. Transition curves. Vertical curves. Railroad turnouts and crossovers. Earthwork computations. Leveling. Transit problems. Allowable errors. Determination of true north. Instruments and their adjustments. Taping. Mapping. General tables and information. Index.

Note. The comprehensive scope of this work is indicated by the table of contents. The author is a prominent engineer with thirty-five years of practical experience. He has included here the kind of information that he has found is often needed in designing and supervising construction. The material consists mainly of tabulated data, structural design details, model specifications, check lists, and concise descriptions of procedures. The first two volumes are for office use, but the third volume is designed for carrying in the field when necessary.

SIEGELE HERMAN HUGO

Building trades dictionary, a book written in simple language, defining words phrases and expressions pertaining to the building trades covering carpentry bricklaying, plastering concrete construction, stone masonry cement finishing electrical work, sheet metal work, plumbing steam fitting, form building, painting, roofing, and other building trades. Chicago Frederick J Drake & Co 1946 380 p. illus. 23 cm. $3.00 1641

Note: Although terms are included in this dictionary from all the trades mentioned in its subtitle, a large proportion of these and most of the illustrations relate to carpentry. Most of the definitions are rendered in the language of the trade, hence the book's chief use will be as an addition to the apprentice's and craftsman's personal libraries.

SINGLETON, JACK

Manual of structural design. Third edition Topeka H. M Ives & Sons 1947 336 p illus 26 cm. $6.00 1642

Note. A standard handbook of methods, formulas, and data which are useful to professional structural engineers. Although a considerable part of the material relates to steel, there is also much data on reinforced concrete, aluminum, and wood. The bulk of the information is in tabular form and relates to shapes, sizes, and weights of various structural members, universal beam tables, shear constants, bending and direct stresses, weights of building materials, etc. Formulas, worked examples, and the American Institute of Steel Construction structural specifications and code of practice are also included. In this edition the work has been enlarged by more than 100 pages to include new tables and revised specifications and properties of new structural steel shapes.

SLEEPER, CATHARINE, AND HAROLD R. SLEEPER

The house for you to build buy or rent Illustrations by Henry Diamond and Lombard C. Jones. New York John Wiley & Sons Inc., 1948 313 p illus. 27 cm. $5.00 1643

Contents. Your house is your castle. Rent, buy or build? Rent—for tryout. Renting snags. Rent—its and ands. Architects' lingo. Buy—to your advantage. Blind buying. What can you buy and what can you spend? Shopping for your house. Know what you buy. Build—to feather your own nest. Build—but don't bungle. Tackling your house. Meet Mr Architect. Without benefit of architect. Money talks. Pick your site. Tailoring the house and lot. Architects' sign language. Types and styles. How to solve the puzzle—planning. Planning for sleeping—bedrooms, closets, bathrooms. Planning for feeding. Planning for work spaces and storage. Finishes. Designing the exterior. Keeping the gremlins out. What makes the house tick? Gadgets. Ready! Set! Go! Index.

Note. A popular but fairly comprehensive guide to the planning and building of dwelling houses. Much of it deals with non-technical subjects such as the arguments for and against home ownership; and the advantages of employing an architect to plan and build a house but a fair share of it is given over to explaining, by means of numerous drawings and an easy text, the materials, construction methods, and equipment of small houses as they are built in the U. S. A. today

STALEY, HOWARD RAYMOND

Semi-fireproof construction New York D Van Nostrand Company Inc., 1948 327 p. illus. 24 cm. (A technical series on building construction, Walter C. Voss editor) $6.00 1644

Contents: Introduction. Starting the construction operation. Soils for foundations. Excavation and sheet piling. Pile foundations. Footing and foundation walls. Exterior masonry walls. Interior and special masonry work. Framing of floors and flat roofs. Pitched types of roof framing. Roofing. Interior work. Rigging and derricks. Industrial buildings. Index.

Note. A concise manual of building materials and construction methods currently employed in the U.S.A. in buildings of types III, IV and V as defined by the American Iron and Steel Institute. A complete coverage of these fields is not provided, but the materials and methods described cover a wide range and are the more commonly used ones. There are many excellent drawings of structural details and also illustrations of selected power tools. The chief use of the book will probably be as a textbook in engineering colleges, but it can serve also as an elementary reference book in the building industry

STODDARD, RALPH PERKINS, editor

Brick structures how to build them practical reference data on materials, design, and construction methods employed in brick construction for contractors, builders, archi-

tects, engineers, and students An authoritative manual on brick masonry with particular reference to the structural uses of brick in residences and other small buildings Eleventh edition. New York McGraw Hill Book Company Inc. 1946 169 p illus 23 cm. $2.20 1645

Contents Structural properties of brick and brickwork. Building brick masonry Structural uses of brick masonry Construction other than exterior walls. Reference tables for designing and estimating brickwork. Index.

Note This short book explains, by means of clearly written text and generous number of illustrations, modern methods of building with brick. It deals not only with the building of exterior walls, but with interior walls, chimneys, fireplaces, walks, and also related topics such as flashing, furring, and plastering. Earlier editions were published by the Brick Manufacturers' Association of America.

SWANSON WILLIAM ELMER

Log cabins New York The Macmillan Company 1948 207 p illus 21 cm. $2 95 1646

Contents Building procedure. Types of cabins. Selecting location. Tools. Available timber on property Clearing the site. Building preparation. Foundations. Walls. Roofs. Floors. Windows and doors. Porch and garage. Interior and exterior of cabin. Fireplaces. Water and sewerage. Furniture. Care of cabin and grounds. Miscellaneous. Index.

Note: A practical manual which is aimed particularly at amateurs who lack experience in building. All of the operations that come up in the construction of small log cabins and related structures such as fences and cabin furniture are covered amply and in explicit detail. There are about two hundred illustrations.

UNITED STATES FOREST SERVICE. FOREST PRODUCTS LABORATORY

Manual on wood construction for prefabricated houses Prepared by The Forest Products Laboratory, Forest Service, U S Department of Agriculture in collaboration with the technical staff of the Housing and Home Finance Agency Washington, D C Government Printing Office, 1947 330 p illus. 26 cm Paper $1.50 1647

Contents. Introduction. Basic information on wood as housing material. Factors affecting the use of wood in housing Grading of lumber and plywood. Strength of housing materials Protection of wood from decay insects, fire. Paints and painting. Insulation and ventilation of houses Seasoning and storage of housing materials. Machining of wood and other housing materials Glues and gluing. Wood and plywood for specific parts of houses. Joints and fastenings. Prefabrication operations. Repair techniques. Glossary Index.

Note. Intended primarily for the use of house designers, prefabricators, builders, contractors, engineers, and housing officials, this manual is comprehensive illustrated guide and reference work on construction techniques for prefabricated houses of wood. It is based chiefly upon the accumulation of information resulting from studies in wood handling and processing conducted by the Forest Products Laboratory over period of 34 years, supplemented by information obtained in survey of current fabrication methods in prefabrication plants It includes new contributions as well as basic information on the subject.

UNITED STATES FOREST SERVICE. FOREST PRODUCTS LABORATORY

Technique of house nailing By Forest Products Laboratory Forest Service, U S Department of Agriculture, in collaboration with the technical staff of the Housing and Home Finance Agency Washington, D C. Government Printing Office 1947 53 p illus. 23 cm. Paper $0 15 1648

Contents Introduction. Recommendations for nailing Key to drawings. Figures 1 51. Sizes of common wire nails. Glossary of housing terms.

Note This pamphlet presents information for home builders on correct nailing practice and gives precise specifications for nailing. Four pages of text are followed by forty-four pages of figures, each figure accompanied by brief descriptive note. Each drawing illustrates separate nailing problem in house construction, such as corner post, studs, anchorage of studs to sill, floor opening, door opening, bevel siding. The drawings show clearly how many nails are advised, where they should be driven, and whether they should be directly nailed or "toenailed. The techniques illustrated are based upon engineering studies, testing, observation of nailing practices, and investigations conducted by the Forest Products Laboratory

UNITED STATES NATIONAL HOUSING AGENCY

Building code requirements for new dwelling construction recommended by the National Housing Agency and prepared in consultation with the National Bureau of Standards Washington, D C Government Printing Office 1946 43 p illus 26 cm. (United States National Bureau of Standards Building materials and structures report BMS 107 superseding BMS 88) Paper $0.20 1649

Contents: Introduction. General. Definitions. General building limitations. Light and ventilation. Space and arrangement. Exits. Construction. Fire protection. Chimneys and fireplaces. Heat appliances—mounting, clearances, and connections. Safeguards against accidents Electrical. Plumbing. Appendix.

Note The National Housing Agency in consultation with the National Bureau of Standards developed the recommended minimum requirements for dwelling construction here published for consideration by local authorities in revising their building codes. The requirements are based upon national standards, with such additions, modifications, and exceptions as the experience of the housing agencies has demonstrated to be advisable in the case of dwelling construction

VOSS WALTER CHARLES

Fireproof construction New York D Van Nostrand Company Inc. 1948 286 p illus. 24 cm. (A technical series on building construction, Walter C Voss editor) $6.00 1650

Contents: Introduction. Preliminary and incidental work. Rock excavation. Foundations. Structural frames. Floor systems. Erection of the structural frame. Exterior walls. Fireproofing and partitions. Interior finish Roofing and sheet metal. Building services Index.

Note. This volume will serve as manual of good practice for the construction of fire resistant buildings, rather than as comprehensive text on the subject. It describes some of the commonly accepted methods utilized in the construction of buildings classified as "first class" by the National Board of Fire Underwriters and the American Iron and Steel Institute The book is well illustrated with diagrams and photographs and each step in the construction process is discussed in the light of accepted practices, choice of materials, handling of materials, and organization of the job.

WHITTEMORE HERBERT LUCIUS AND OTHERS

Strength of houses application of engineering principles to structural design. By Herbert L. Whittemore John B Cotter Ambrose H. Stang and Vincent B Phelan Washington, D C Government Printing Office, 1948 132 p illus. 27 cm. (United States. National Bureau of Standards Building materials and structures report BMS 109) $1.50 1651

Contents: Introduction. Outline of method for determining strength of houses. Dead load. Floor load. Wind load. Snow load. Water load. Assumptions. Conventions. Reactions on elements of house. Roof. Hip and valley rafters. Walls. Partitions. Floors. Weights of house constructions. Variations in strength of house constructions. Allowable loads on house constructions. Comparison of allowable loads with design loads for typical houses. Conclusions. Selected references.

Note: Methods for designing small houses to have adequate strength without waste of material are described and illustrated in this report, which applies engineering methods to house design. Fundamental data for wind, snow and floor loads are given and convenient methods for computing applied loads are described. One purpose of the publication is to open the way for designers to introduce unconventional materials and unusual methods of fabrication by laboratory determination of strength of construction. Another is to indicate where careful engineering scrutiny shows superfluous quantities of material being used in houses constructed by traditional methods. The authors conclude as follows: "General adoption of the approach to the design of houses for strength discussed in this publication, with such modifications as experience shows are necessary, should result not only in greater safety for occupants but through economical use of materials should also result in savings in cost of construction.

WILLIAMS HENRY LIONEL AND OTTALIE K. WILLIAMS

Old American houses and how to restore them [1700–1850] Garden City, New York Doubleday & Company Inc., 1946 239 p illus. 26 cm. $3 75 1652

Contents: Introduction—Understanding old houses. The old Colonial hallmarks of houses. How old is my house? Preserving the intangibles. Trifles that make perfection. House timbers. Rafters and rafters. Walls—inside and out. Doors and doorways. Fixing the floors. The eyes of the house. Door and shutter hardware. Hearths and chimneys. Steps up and steps down. Paints, plasters, and old pails. Removers and rubbishers. Glossary. Bibliography. Index.

Note: An illustrated guide for those who are interested in remodeling old houses while preserving their character. The book is concerned with eighteenth-century cottages built in the Early American, Georgian, or Greek Revival style. The reader will find therein expert advice on how to identify style and age and how to remodel parts in harmony with the whole. Building materials and building methods of the era are discussed as the authors analyze the various types of houses according to their structural parts: roofs, walls, floors, and so on. The basic thesis is that to make living in an old Colonial ... source of satisfaction sentiment must be supported by an understanding of the principles of restoration and remodeling. Some of the operations which are undertaken in remodeling are described, but the book is not intended for the practical builder. The subject is pursued further in the authors' *Modernizing old houses*, Garden City: Doubleday & Company Inc 1948, 180 p., $4.95

WILSON JOHN DOUGLAS AND S O WERNER

Simplified roof framing. Second edition. New York McGraw Hill Book Company Inc., 1948 160 p illus. 21 cm. $2.00 1653

Contents: Roof terms, types, and principles. The gable roof. The hip roof. The intersecting roof. The unequal pitch intersecting roof. Special problems and cuts. Summary of roof information and basic layout principles. The steel square and its use. Index.

Note: Roof framing is ... specialized branch of carpentry· but because most carpenters have occasionally to frame roofs, they require printed information on the subject. This book, primarily ... vocational school textbook, is useful for self-instruction for both carpenters and home mechanics. It provides clear detailed discussions, and there are 113 illustrations. The first six chapters are little changed from the first edition (1927) but the last two are new

BUILDING ALLIED TOPICS

AMICK CHARLES L.

Fluorescent lighting manual. Second edition. New York McGraw Hill Book Company Inc., 1947 318 p illus. 23 cm. $4.00 1654

Contents: The fluorescent lamp. Auxiliary equipment. Operating characteristics. Installation hints. Service suggestions. Luminaire selection. Fluorescent lighting design. Color quality. Fluorescent applications. Lighting economics. Appendix. Index.

Note: (4404) Technical and semi-technical information for manufacturers, salesmen, maintenance men, and also for merchants, factory managers and others interested in lighting from the user' viewpoint is provided in this manual. The changes in the second edition reflect the development in fluorescent lighting technique over ... period of five years. Substantial parts of the text have been completely rewritten. Tables containing electrical and other data have been considerably expanded. Such topics as preheated cathode starting, starting switches, sequence starting, cold-cathode ballasts and transformers, and other auxiliary equipment are treated in detail. On the subject of lighting comfort, the author presents ... formula for discomfort and numerical glare factor, and tables for glare-rating calculations, and he discusses current ideas in lighting for schools, stores, and factories.

BEDELL EARL L. AND ERNEST G GARDNER

Household mechanics. Second edition. Scranton, Pa. International Textbook Company 1945 241 p illus. 29 cm. $2.98 1655

Contents: Woodworking. Metalworking. Painting and finishing in the home. Care of electric appliances. Water supply and waste disposal. The care of doors. The care of windows. Using concrete, mortar and plaster. Using rope and twine. The home workshop. Index.

Note: (4398) The first edition of this manual, published in 1937 was planned for use in vocational school courses. Although the second edition is still (except for the final chapter) organized in jobs, each of which is organized as ... teaching unit, more attention has been paid to the needs of the homeowner who does his maintenance work, with the result that the book is now also ... satisfactory manual of instructions for numerous simple household repairs. The instructions for each operation are clear and explicit, and there are numerous illustrative drawings.

CLOSE, PAUL DUNHAM

Building insulation a treatise on the principles and application of heat and sound insulation for buildings. Third edition. Chicago American Technical Society 1946 372 p illus. 21½ cm. $4.50 1656

Contents: Introduction. Thermal building insulations. Methods of application. Fundamentals of heat transfer through building materials. Transmission coefficients and tables. Calculating heat losses. Effect of building insulation on heating plant size. Fuel saving. Economics of insulation. Insulating efficiencies. Expansion of roofs. Condensation. Insulation and comfort. Pipe and duct insulation. Sound insulation. Machinery isolation. Architectural acoustics and noise quieting. Insulating farm structures. Questions pertaining to building insulation. Index.

Note. (3430) A comprehensive treatment that is of practical value not only to the architect, engineer and insulation salesman, but also to homeowners. It discusses the various types of insulating materials now in use, gives trade names, engineering data, and names of manufacturers. Application methods also are thoroughly described. Compared to the second edition, ... chapter has been added on the insulation of farm structures and there are additional minor revisions.

CLOSE, PAUL DUNHAM

Thermal insulation of buildings, a treatise on the principles of thermal building insulation for dwellings and other structures New York Reinhold Publishing Corporation, 1947 104 p. illus. 23 cm. Paper $1 75 1657

Contents: Definitions, purpose and advantages of insulation. Theory and basic principles of insulation. Heat loss coefficients. How to calculate heat losses. Estimating fuel saving. Preventing surface condensation. Preventing condensation within walls and ceilings. Summer and winter comfort due to insulation. Manufactured insulations. How to apply insulating materials. Insulating farm buildings. Appendices: Insulation trade associations. Manufacturers of insulation. Trade names. Index.

Note. Mr. Close's *Building insulation* described above is ... standard book. This briefer work covers heat insulation but omits sound insulation. The first-mentioned topic is treated concisely but all of

the essential points are covered and in a few places, particularly in the discussion of vapor barriers, there are additional data. This title is designed for the use of architects, building-supply dealers, and salesmen of insulation. The earlier work with its more expansive discussions and greater number of illustrations is more suitable as a reference book.

Cobb Hubbard editor

The complete home handyman's guide hundreds of money-saving, helpful suggestions for making repairs and improvements in and around your home. New York Wm. H. Wise & Co., Inc. 1948 500 p illus 22 cm. $3 95 1658

Contents Tools and materials. The workshop. Home construction. Furniture. Painting Heating. Plumbing. Electricity Exterior repairs Interior repairs Property improvements. Simple carpentry Working with metal. Buying a home. Handymen hints. Index.

Note An encyclopedic manual of information useful to home-owners. For the most part, it deals with household repairs but there is also a considerable amount of material on handicrafts such as metalworking. The book is no more original than numerous other books on the same subject, but it is useful because it provides information on a wide range of topics in language that persons without training in crafts can understand. The text is supplemented by a fair number of illustrations.

Crewdson Frederick M

Spray painting industrial and commercial. Wilmette Ill. Frederick J Drake and Company 1948 169 p illus 19 cm. $2 00 1659

Contents: Common paint pigments Paints and enamels. Oil and spirit varnishes. Shellac. Lacquer Synthetics. Equipment. The technique of spraying. Spraying standard materials Spraying defects, their cause and remedy Bronzes and their application Flock, or suede finishes. Striping and lettering Pearl lacquer the aristocratic finish Automatic spraying. Electrostatic spray painting. Agricultural spraying. Automobile spray painting. The sprayer's "ten commandments." Index.

Note (4422) This manual provides simple descriptions and outlines of the materials and techniques of spray painting It is intended for men in the craft. The present edition contains some useful material that did not appear in the 1941 edition. A new edition was scheduled for publication in 1949

Crouse William Harry

Home guide to repair upkeep and remodeling. New York McGraw Hill Book Company Inc., 1947 358 p illus. 23 cm. $3 75 1660

Contents Carpentry Painting Plastering Wallpaper hanging. Concrete. Brick and stone masonry The electrical system. Plumbing—water, gas, sewerage Linoleum and tilework Heating, ventilating, and air conditioning. Care and repair of floors. Inside walls and ceilings. Doors and windows. Outside walls Roofs. Basements. Attic rooms. Building a garage. Adding a wing Care and repair of furniture. Fire and other hazards General insurance regulations, Insect and vermin control. Care of grounds Features of prefabricated houses Other upkeep and repair jobs Index.

Note Simple and practical directions for the performance of many maintenance and repair operations are given in this book, which is addressed to householders who wish to do such tasks themselves or to understand how they should be done Some of the topics, for example building an extension to an existing house, are treated superficially but in most cases the information given is adequate to the purpose.

Dalzell James Ralph

Building trades blueprint reading. Parts I and II. Chicago American Technical Society 1945 2 v illus. 28 cm. Paper $2 25 per volume. 1661

Contents Part I Fundamentals Part II, Specifications, blueprints, and estimations. Answers to problems in Part I and Part II.

Note An introductory textbook for use in vocational courses. In the first volume the various types of architectural drawings, such as elevations, floor plans, and structural details, are explained. The second volume contains two full-sized blueprints of a typical single-family residence and two two-apartment buildings. Question sheets and problems are included. A revised edition of Part I was scheduled for publication in 1949

Durbahn Walter Edward

Fundamentals of carpentry edited by J Ralph Dalzell. Chicago American Technical Society 1947–48 2 v illus 22 cm. Vol. I, $3.25 Vol II, $4.25 1662

Content Preface, by J Ralph Dalzell. Vol. I, Tools, materials, practice Carpentry as a trade. History of carpentry tools. Modern carpentry tools, tool kits, and equipment. The framing square. Principal woods, their uses, grades, classifications. Insulation. Wood fastenings. Essential preparation for building a house. Blueprint reading. A typical American house. Appendix. Dictionary of carpentry terms. Index. Vol. II, Practical construction The house of the book. Foundation formwork. Wall and floor framing Roof framing. Exterior finish. Interior finish. Farm buildings. Appendix. Index.

Note. An explicit treatment of carpentry designed for beginners. Although it is adapted chiefly for use in organized courses, so much information is given that it is virtually a cyclopedia of house carpentry Illustrated, step-by-step directions are given for many types of projects from the construction of a sawhorse to the building of a single-family house. Among the material of reference value are a glossary of carpentry terms and data on insulating materials, fasteners, builders' hardware.

Ewing Claude H., and Harry A. Harris

Practical instruction for paper hanging complete textbook covering tools processes and elements for hanging paper on walls, ceilings and panels. Chicago Frederick J Drake & Co 1946 223 p illus. 19 cm. $2.00 1663

Contents Paste table work and hanging simple patterns. Hanging special papers Hanging paper around doors and windows. Hanging ceiling papers. Hanging panel paper Preparation of surfaces.

Note. Except for the final chapter the instruction in this trade school text is given in the form of 63 practice jobs for the student to accomplish. Each such project covers a different phase of the paper hanging process and includes objectives of the job, preliminary information, equipment and handtools, materials, and procedures. A considerable portion of the book was published by McGraw-Hill in 1930–31 under the title *Instruction manuals for paper hangers.*

Fahsbender, Myrtle

Residential lighting New York D Van Nostrand Company Inc. 1947 269 p illus. 29 cm. $10 00 1664

Contents: Part I Residential lighting equipment. The influence of period styling on lighting fixture design. Portable lamps and lamp shades Designs and materials in portable lamps. Fluorescent lighting in the home. Lighting the rooms of the home. Home wiring Garden lighting. Christmas lighting. Part II Light and vision. Electrical and illumination terms. Light sources. Color and light in the home. Bibliography Index.

Note. Residential lighting, that is, the proper selection and placing of electric lamps and fixtures in a home so as to harmonize with the furnishings and to provide the correct amount and quality of illumination is the principal subject of this oversized book. The many excellent illustrations show indoor and outdoor lighting applicances, methods, and arrangements. About one third of the text is devoted to an easily understandable treatment of technical details such as the various types of lamp bulbs and their uses, the properties of light, how to make minor repairs to wiring, etc. The work should be useful to homeowners, interior decorators, architects, and builders. The author is Director of Residential Lighting for the Lamp Division of the Westinghouse Electric Corporation.

Forsythe, William Elmer and Elliot Q Adams

Fluorescent and other gaseous discharge lamps. New York Murray Hill Books, Inc., 1948 292 p. illus. 23 cm. $5 00 1665

Contents: Light and radiation. The discharge of electricity through gases and vapors. The basis of the fluorescent lamp. The fluorescent lamp. Phosphors—natural and synthetic. Operation of the fluorescent lamp. Quality of fluorescent lamps. The production of ultraviolet radiation by fluorescence. Delayed phosphorescence. Fluorescence and television. Arcs—their operation and light output. Light sources of short duration. Index.

Note: A concise, technical survey of the theory of fluorescence and of the related principles that underlie the construction and operation of modern fluorescent lamps and other devices that use electrical discharges through gas in the production of light. The authors outline the gradual acquisition by observation and experiment of the knowledge that led to the development of the modern fluorescent lamp. They discuss in detail the operating characteristics of these lamps and furnish many data of value to lighting engineers. The final chapters briefly describe the operating principles of such devices as the infrared telescope, iconoscope, sniperscope, cathode-ray tubes used in television receivers, and flash tubes for photography. Both authors are associated with the General Electric Company.

THE HOME MECHANIC'S HANDBOOK, an encyclopedia of tools materials methods and directions. New York D Van Nostrand Company Inc., 1945 804 p. illus. 21 cm. $6 95 1666

Contents: Painting and decorating section. Knowing paint. Brushes and other painting equipment. Color in painting and decorating. Color mixing and use. Exterior painting. Interior house painting. Finishing with stain, shellac, and varnish. Decorative paint finishes. Wall papering. Automobile refinishing. Woodworking section. The common woods and their uses. Woodworking tools and how to use them. Materials used by the woodworker. Hints for the woodworker. Wood carving. Repair jobs and projects. Metalworking section. The common metals and their uses. Metal working tools and their uses. Hints for the metal worker. Using the engine lathe. Metal projects. Plumbing section. Pipe, pipe fittings, valves, fixtures, and insulation. Tools used in plumbing work. Pipe measuring, cutting, threading, and installation. House plumbing jobs. Masonry section. Concrete. Plastering. Stucco. Bricklaying materials and tools. Bricklaying operations. Glossary of bricklaying terms. Concrete blocks. Glass blocks. Electrical section. Brief sketch of electrical principles. Electrician's tools. General operations in electrical work. Signaling systems. Electrical wiring with BX cable. Electrical wiring in rigid conduit. Electrical appliances. Fixed electrical equipment.

Note: The home mechanics to whom this book is addressed are the multitudes of persons who make things in home workshops without benefit of advice or assistance from skilled craftsmen, or perform repairs about their dwellings. The information included is in general what this class of reader needs: discussions of tools and their care; common materials, their uses, standard dimensions, and working directions for making such things as concrete walks; specific and detailed directions for repairing leaky faucets, hanging wallpaper, etc. More varied and, in most cases, more precise directions are given than in other books addressed to the same group. There are more than 700 illustrations, some of which are rather poorly reproduced.

ILLUMINATING ENGINEERING SOCIETY

IES lighting handbook, the standard lighting guide. New York Illuminating Engineering Society 1947 635 p illus. 23 cm. U.S., $7.50 foreign countries $8.00 1667

Contents (abridged): Reference division. The physics of light production. Light and vision. Standards, nomenclature, abbreviations. Color. Measurement of light. Light sources. Light control. Lighting calculations. Daylighting. Application division. Interior lighting. Exterior lighting. Transportation lighting. Photographic, reproduction, projection and television lighting. Miniature lamp applications. Miscellaneous applications of radiant energy. Appendix. Manufacturers' data. Index.

Note: A comprehensive reference book of information useful to illuminating engineers, architects, factory managers, and other persons concerned with the design or selection of lighting systems and equipment. It is rather similar in scope and organization to the engineering handbooks in other fields of engineering. The range of subjects is broad; the discussion of specific topics is concise but in most instances is adequate to ordinary needs; and a considerable proportion of the data included is presented in graphical and tabular form. The sections are supplemented by bibliographical lists.

LAIR ELBERT A.

Carpentry for the building trades. New York McGraw Hill Book Company Inc., 1947 188 p. illus. 24 cm. $3 00 1668

Contents: Framing. Rafter framing. Roofing and siding. Lath and plaster. Finish—trim, windows, and doors. Glass—glazing—insulation. Lumber—grading and measuring. Scaffolds and safety measures. Blueprints and specifications. Projects, questions, and problems. List of visual aids. Index.

Note: An elementary vocational school textbook that should be useful also to homeowners who wish to know how houses are constructed and to amateurs who are planning to undertake simple building operations. All of the tasks that fall to the carpenter in the building of small houses are described in simple language and clear illustrations. The author is Instructor in Building Trades, Jacksonville High School, Jacksonville, Illinois.

MANLY HAROLD PHILLIPS editor

Drake's householders' cyclopedia, a "how to-do-it" book construction, installation, maintenance and repair home buildings, their equipment, furnishings and accessories Wilmette, Ill. Frederick J Drake & Co 1948 646 p. illus 20 cm. $5.00 1669

Contents (abridged): Basement waterproofing. Bookcases. Cleaners and spot removers. Concrete mixing, patching, cleaning. Electric wiring and lighting installation instructions. Fireplace and chimney troubles and remedies. Floors and flooring. Furniture repair and finishing, with upholstery repairing. Glass and glazing, windows and doors. Lattice-work. Oil burners, care and adjustment. Paints and painting. Plaster and plastering. Refrigerators, electric. Roofs and roofing. Sewing machines, upkeep and adjustments. Tile, floor and wall. Toasters, electric, troubles and remedies. Vermin protection, termites, rats. Washing machines, repairs and replacements, troubles and remedies. Weatherproofing. Woodworking. Index.

Note: A handy miscellany of practical information pertaining to maintenance and repairing of dwellings and household articles. Selected small construction projects also are covered. No book of this type can be complete, but this one compares well with others recently published. Most of the articles are brief but some of them run to twenty pages. As the table of contents (abridged above) indicates, the range of topics is wide. The main arrangement is alphabetical but there is also an index that greatly facilitates the use of the book.

MOON PARRY AND DOMINA EBERLE SPENCER

Lighting design. (Cambridge, Mass. Addison Wesley Press, Inc., 1948) 482 p. illus. 23 cm. $5.00 1670

Contents: Fundamentals. Lamps and luminaires. Reflecting and transmitting media. Calculation of pharosage and helios. Interflections. Helios. Maintenance. Vision. Eight factors in lighting design. Lighting design. Color. Appendices. Index.

Note: Although this volume is based on courses given at the Massachusetts Institute of Technology and is intended primarily as a text for students, it is of considerable value to architects, illuminating engineers, and others concerned with the design and installation of lighting systems. The first three chapters discuss the basic principles of electromagnetic radiation and describe the characteristics and efficiencies of various types of light sources. Here also are extensive tabulations of data regarding the performance of incandescent, mercury-vapor and fluorescent lamps, luminosity, and the reflective ability of various types of surfaces. The remainder of the volume serves as a guide to the designing of interior lighting systems. Bibliographies given at the end of each chapter comprise a total of 20 pages.

RETTINGER, MICHAEL

Applied architectural acoustics. Brooklyn N Y Chemical Publishing Co., Inc., 1947 189 p illus. 22 cm. $5.50. 1671

Contents: Introduction. Fundamental equations and definitions of symbols. Geometric acoustics. Reverberation. Architectural acoustics. Sound insulation. Acoustic materials. Motion picture theaters. Scoring stages. Reverberation chambers. The vocal octave. Sound-

stages. Broadcasting studios. Television studios. Hospitals. Churches. Auditoria. Acoustic measurements. Bibliography Tables. Index.

Note: Containing figures, formulas, and tables, this is practical handbook and book of theory for the use of architects and others who must deal with acoustical problems. Special attention is given to the acoustics of rooms in which sound is either recorded, such as motion picture studios and broadcasting studios, or reproduced electrically such as motion picture theaters and monitoring rooms. The physical and mathematical reasoning underlying recent progress in the field of architectural acoustics is presented as basis for practical application.

VANDERWALKER, FRED NORMAN

Drake's cyclopedia of painting and decorating methods, tools materials for home and the workshop finishing walls floors furniture, automobiles boats houses etc. data for arts and crafts workers. Chicago Frederick J Drake & Co 1945 388 p illus. 20 cm. $3.00 1672

Note In this book no attempt is made to treat any subject exhaustively but practical information is given on some two hundred and fifty topics ranging from acoustic ceiling painting to washing painted walls and whitewash mixtures. Considerable attention is devoted to paint formulas and mixing colors. An extensive index makes this ready reference manual on materials, tools, and work procedure.

WALKER PERCY HARGRAVES, AND EUGENE F HICKSON

Paint manual with particular reference to Federal specifications. Washington D C. Government Printing Office, 1945 165 p illus 20 cm. (United States. National Bureau of Standards Building materials and structures report BMS 105) $1.00 1673

Contents (abridged) Comments on individual materials: Liquids not generally used alone. Pigments. Ready-mixed oil and varnish vehicle paints. Varnishes and analogous products. Water paints. Preparation of surfaces and application of painting materials: Woodwork. Masonry concrete, and plaster. Ferrous metal. Nonferrous metal. Steel submerged in water Care and preparation of painting materials Storage of painting materials Preparation of ready-mixed paints. Mixing of pastes and powders. Care of brushes. Safety measures. Falls. Fire. Poison. Sampling and inspection Instructions and precautions for sampling. Inspection. Paint failures: Adhesion. Alligatoring. Bleeding Blistering and peeling. Chalking Checking. Cracking and scaling. Crawling "Fading" of color Loss of gloss Running and sagging Tackiness and slow drying. Washing. Wrinkling. Bulking values of pigments and liquids Pigments. Oils. Solvents Resins and other film-formers. Plasticizers Literature references. Glossary of selected paint terms. List of Federal specifications. Index.

Note This manual, based largely on Federal specifications, was compiled chiefly to aid in the procurement of materials that would be suitable and adequate for most kinds of painting and that would assure successful application It describes methods for the preparation of surfaces and the application of coatings known from experience to give satisfactory results.

WHITMAN ROGER BRADBURY

First aid for the ailing house Fourth revised edition. New York Whittlesey House McGraw Hill Book Company Incorporated 1946 394 p illus. 21 cm. $2 75 1674

Contents: House heating. Plumbing. Concrete. Painting. Metal work Walls. Roofs and windows Inside walls. Floors. Interior woodwork and cabinetwork Heatproofing house. Cellars. Rebuild and condensation Cleaning—spot and stain removal. Furniture Insect control. Outdoor damage. Miscellaneous. Information on houses. Index.

Note (1934) A handbook of practical information for householders who attend to their own maintenance and repairing. It is based on syndicated newspaper column that has appeared for many years in certain United States newspapers. The present edition is thirty-five pages longer than the third edition. Some of the added material deals with new materials, other with problems that were not discussed in the earlier editions.

ROAD AND RAILROAD BUILDING

AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS

Standard specifications for highway materials and methods of sampling and testing. Fifth edition Washington, D C. American Association of State Highway Officials, 1947 2 v illus. 24 cm. $6 00 1675

Contents Part I, Standard specifications for materials. Hydraulic cement. Bituminous materials. Aggregates. Brick. Expansion joint fillers and asphalt plank. Culvert and sewer pipe. Bridge paints. Reinforcing steel and wire rope. Metallic materials for bridges. Miscellaneous. Index. Part II, Standard methods of sampling and testing highway materials Hydraulic cement. Bituminous materials. Soils. Aggregates. Concrete. Brick. Joint filler pipe, and asphalt plank. Metallic materials. Index.

Note. A compilation of specifications and methods of sampling and testing which have been officially adopted by the American Association of State Highway Officials. Most of the standard specifications are original with the A.A.S.H.O.; but few of them are identical with specifications of the American Society for Testing Materials. On the other hand, most of the sampling and test methods are identical with official methods of the A.S.T.M. The fourth edition of the compilation was published in 1942. The changes in the present edition are not extensive, but they include the addition of two new specifications, the revisions of thirteen, and the addition of three sampling methods. A new edition is scheduled for publication in 1950.

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on mineral aggregates (1948) Fifty-first annual meeting American Society for Testing Materials, Detroit, Michigan, June 21–25 1948 Philadelphia American Society for Testing Materials, 1948 233 p. illus 23 cm. (Special technical publication no 83) Paper $3 00 1676

Contents: Introduction to symposium, by K. B Woods Distribution of mineral aggregates, by K. B. Woods Petrographic and mineralogic characteristics of aggregates, by R. Rhoades and R. C. Mielenz. Physical and chemical tests of mineral aggregates and their significance, by H. S. Sweet. Sampling of mineral aggregates, by C. E Proudley Production and manufacture of fine and coarse aggregates, by M. C. Rockwood. The grading of aggregates for bituminous construction, by J. E. Benson. Grading of mineral aggregates for Portland-cement concrete and mortars, by W H. Price Influence of mineral aggregates on the strength and durability of concrete, by C W Allen Lightweight aggregates, by R. E. Davis and J. W Kelly Mineral aggregates for bituminous construction, by J T Pauls and C. A. Carpenter Mineral aggregates for low-cost roads and water bound macadams, by E. A. Willis and J. A. Kelley, Jr Mineral aggregates for railroad ballast, by A. T Goldbeck. Mineral aggregates in the chemical and processing industries and in certain other uses, by H. F Kriege. Needed research, by D O. Woolf.

Note A collection of technical papers addressed to engineers, purchasing agents, and persons concerned with the establishment of standards and specifications for industrial materials. Most of them are devoted to aggregates for use in road construction, and most are accompanied by lists of references and reports of the discussion at the meeting.

BATEMAN JOHN HENRY

Introduction to highway engineering a textbook for students of civil engineering. Fifth edition. New York John Wiley & Sons, Inc. 1948 538 p. illus 24 cm. $5.50 1677

Contents Development of highways. Highway subgrade soils. Drainage. General features of highway design. Grading operations

and construction of subgrades. Bituminous materials. Theory of structural design of flexible pavements. Earth, gravel, traffic-bound macadam, and stabilized soil base courses and surface courses. Broken-stone base and surface courses. Bituminous surface treatments and low-cost bituminous surfaces. Theory of structural design of concrete pavements. Concrete pavements and base courses. Sheet asphalt and asphaltic concrete pavements. Rock asphalt pavements. Block pavements. Highway and street maintenance. Surveys, plans, specifications, and supervision of construction. Economics of highway improvement. Highway planning, financing, and administration. Appendices: Determination of street intersection elevations. Tables for determining volumes of earthwork. Problems. Index.

Note: (3490) A standard textbook for college students of civil engineering. It is outstanding for its thorough coverage of modern road-building materials and techniques. In the present edition the work has been extensively revised, and such chapters as those on highway subgrade soils, bituminous construction, grading operations, concrete, soil-cement and bituminous soil bases have been expanded to include recent developments. Many of the bibliographies collected at the ends of the chapters have been brought up to date and the collection of review problems has been revised and enlarged. There are now over 170 figures, many of which are reproduced from photographs of actual steps in the building of roads.

KURTZ CHARLES MEARS

Track and turnout engineering, a hand book on design details of railroad turnouts and crossings, with mathematical treatments of track layouts and connections. New York Simmons-Boardman Publishing Corporation 1945 461 p. illus. 19 cm. $5 00 1678

Contents: Accepted definitions of general track terms. Design of split switches. Design of frogs. Design of movable point crossings and slip switches. Design of crossings. Design of split switch turnout layouts. Turnouts in paved streets. Turnout engineering. Turnouts connecting with divergent tracks. Connecting tracks. Wye tracks. Siding connections. Crossovers. Yard layouts. Crossing layouts. Solution by traverse. Vertical curves. Easement curves and superelevation. Tables. Index.

Note: An advanced treatment of the subject of track design and layout for engineers connected with maintenance of way or track construction departments of railroads. Numerous illustrative diagrams, worked examples, and tables for making the necessary mathematical calculations are included. Corrections and minor revisions have been made in this edition, and an index has been added.

PORTLAND CEMENT ASSOCIATION

Concrete pavement design for roads and streets carrying all classes of traffic. New York Portland Cement Association, 1946 107 p. illus. 23 cm Gratis distribution limited to the United States and Canada. 1679

Contents (abridged) Foreword. Structural design of concrete pavements: Traffic studies. Stress computation. Edge and interior stresses. Balanced cross-sections. Fatigue of concrete. Application of fatigue principle to pavement design. Procedure for pavement slab design. Subgrades for concrete pavements: Measuring the supporting value of subgrades. Designing for unsatisfactory soils and soil conditions. Preventing damage from frost action. Pavement design on soil-cement or granular subbases. Design of cement-bound macadam. Use of steel in concrete pavements. Jointing of concrete pavement. Design charts. Appendix.

Note: A compact but very useful statement of design procedures and related technical data. Established methods for the design of concrete pavements for roads and streets are discussed; and stresses for wheel loads, fatigue behavior of concrete, subgrade reactions, and other relevant data are presented in tables and charts. The use of steel reinforcement is briefly discussed, and recent information on such matters as traffic volume and wheel load characteristics is included. The booklet is essentially a revised and enlarged edition of F T Sheets' *Concrete road design, simplified and correlated with traffic*, Chicago, 1933.

PORTLAND CEMENT ASSOCIATION

Soil-cement mixtures laboratory handbook. Second edition Chicago Portland Cement Association 1946 79 p. illus. 26 cm. Paper, Gratis Distribution limited to the United States and Canada. 1681

Contents: Soil identification and classification. Soil surveys and soil sampling. Standard soil-cement tests. Supplementary soil-cement tests. Procedures for setting up cement contents to be investigated in soil-cement tests. Analysis of soil and soil-cement test data. Cement-modified soil. Research on soil-cement. Appendices: Summary of test procedures and references. Laboratory equipment requirements for soil and soil-cement tests. Colorimetric test for organic impurities in soils. Soil and soil-cement form sheets.

Note. A manual of soil-cement testing procedures for use by state highway departments and civil engineers engaged in planning, building, or maintaining roads, airport runways, and parking lots compound of soil-cement mixtures. Charts, diagrams, tables, and photographs thoroughly amplify the text. A companion volume, reviewed below completes the set.

PORTLAND CEMENT ASSOCIATION

Soil-cement roads construction handbook. Fifth edition Chicago Portland Cement Association, 1946 86 p. illus 23 cm. Paper Gratis. Distribution limited to the United States and Canada. 1682

Contents: Establishing roadway and profiles and resumé of laboratory tests. Soil-cement road construction. Maintenance suggestions for soil-cement roads. Airport runway construction. Details of field control by resident and soils engineers. Tables: Summary of tests on soil and soil-cement mixtures. Construction cost estimate—equipment. Moisture content determinations. Water application requirements.

Note. A manual of the principles and techniques of building low-cost roads for light traffic loads by combining natural soil and Portland cement. It is addressed both to workers in testing laboratories and to engineers in charge of road planning and construction. The illustrations include many photographs of actual construction operations.

RENCH WALTER FREEMAN

Roadway and track. Third edition. New York Simmons-Boardman Publishing Corporation 1946 350 p illus 23 cm. $5 00 1683

Contents (abridged) Part I, Roadway: The right of way. Drainage of roadbed and track. Vegetation for banks. Economics of roadway machines. Labor saving methods and devices in roadway work. Part II, Track: Program for maintenance of way and structures work. The track obstruction. Power machines and equipment. Labor saving methods in track work. Track materials and their uses. Practice in rail renewals. Practice in rail repair and inspection. Maintenance of main tracks. Maintenance of yards and terminals. Part III, Special problems and duties. Tables. Index.

Note. A standard authority on the maintenance of railroad tracks, roadbeds, and rights-of-way. Although the practices described are chiefly those employed on the Pennsylvania Railroad, practices that have proved successful on other railroads are also described. In this edition the original material has largely been retained but has been augmented with descriptions of new methods and new mechanical equipment. The new equipment described includes such power machines and labor-saving devices as ditch-diggers, snow removers, and equipment for melting snow at switches. The chapter on track materials has been lengthened by adding information on the care of the end on repairing rails by welding. The revision and the inclusion of new illustrations account for approximately eighty additional pages. The copies of this book offered as this bibliography goes to press contain a ten page supplement which covers developments through June, 1948.

SANITARY ENGINEERING

AMERICAN PUBLIC HEALTH ASSOCIATION

Standard methods for the examination of water and sewage prepared approved, and published jointly by the American Public Health Association and the American Water Works Association Ninth edition New York American Public Health Association 1946 286 p illus 24 cm. $4 00 1684

Contents (abridged) Part I, Examination of water—physical and chemical Collection of samples. Laboratory apparatus. Expression of chemical results. Turbidity Color Odor Residue. Hardness. Acidity Alkalinity Carbon dioxide. Bicarbonate ion OH. Silica. Copper Lead. Chromium. Zinc. Magnesium. Ammonia nitrogen. Organic nitrogen. Nitrate nitrogen. Fluoride. Orthophosphate. Sulfate Cyanide Residual chlorine. Chlorine demand Dissolved oxygen. Hydrogen sulfide. Part II, Sewage, sewage effluents, industrial wastes, polluted waters, sludges, and muds Collection of samples. Physical examination. Ammonia nitrogen. Organic nitrogen Dissolved oxygen. Biochemical oxygen demand. Residue or solids. pH value Residual chlorine. Chlorine demand. Sulfides (total, dissolved, and H_2S) Grease Physical tests on sludges. Reaction (acidity alkalinity and pH) of sludges. Nitrogen in sludge Grease in liquid sludge. Part III, Microscopical examination of water sewage sludge, and bottom sediments: Apparatus for water examination. Collection of water samples. Examination of water samples Apparatus for sludge examination Part IV Bacteriological examination of water Laboratory apparatus. Preparation of culture media. Samples. Plating Tests for the presence of members of the coliform group. Estimation of coliform group density Bacteriological control of swimming pools and bathing places Appendix Non-standard methods British practice—bacteriological examination. Appendix II, Chemicals and reagents

Note Each succeeding edition of this standard handbook brings up to date those methods for the laboratory examination of water and sewage which has been most generally accepted as the best in American practice. This edition, the first since 1936, is patterned after its predecessor and the changes consist of the revision and expansion of methods described, the adoption of new standards formerly classed as provisional, chromium, selenium, etc., and the inclusion of additional bibliographical references. The number of diagrams illustrating the setup of laboratory apparatus has been increased from nine to twenty

BABBITT HAROLD EATON

Sewerage and sewage treatment. Sixth edition New York John Wiley & Sons Inc. 1947 692 p. illus. 21 cm. $6.50 1685

Contents: Introduction Developmental and preliminary work. Quantity of sewage Hydraulics of sewers. Design of sewer systems Appurtenances. Materials. Loads on buried pipes. Construction of sewers Trenches and tunnels Laying and constructing sewer pipe. Pumping. Maintenance of sewers Sewage treatment Characteristics of sewage. The disposal of sewage Screening. Sedimentation Chemical treatment Septic tanks and Imhoff tanks Sewage filtration Intermittent sand filters and other filters. Activated sludge Sludge handling and disposal Sludge digestion. Sludge drying and incineration Industrial wastes. Summary of sewage-treatment practices. Operation. Appendix Problems Appendix II *References* Index

Note (1501) Revisions made in the sixth edition of this well-known engineering text stress the importance of design problems, methods of treatment, and plant operation, rather than construction details of sewerage works. The chapter on hydraulics has been completely rewritten, discussions of high-rate filters and contact aerators have been included and data has been modernized New problems have been added and the extensive bibliography has been further expanded by the inclusion of references to literature which has appeared since 1940

BAKER MOSES NELSON

The quest for pure water the history of water purification from the earliest records to the twentieth century New York The American Water Works Association, Inc., 1948 527 p illus. 24 cm. $5 00 1686

Contents (abridged) From the earliest records through the sixteenth century Seventeenth century Eighteenth and early nineteenth centuries. Four centuries of filtration in France. British contributions to filtration. Inception and widespread adoption of rapid filtration in America. Upward filtration in Europe and America. Drifting-sand rapid filters. Plain sedimentation. Coagulation ancient and modern. Disinfection. Distillation. Aeration in theory and practice. Algae troubles and their conquest. Softening. Cause and removal of color Iron and manganese removal. Taste and odor control. Medication by means of the water supply Bibliography Index.

Note. A comprehensive history of civilized man long quest for potable water It records the story of the many complex problems which underlie the task of providing supplies of pure water for human consumption, especially for the residents of cities. The methods of purifying water which were employed in early times in Europe and America are all described and usually depicted. Careful attention has been given to tracing out the history of each developments. The book ends with rich bibliography of the literature which shows library location in selected libraries in the U.S.A. and Europe. The author was formerly associate editor of *Engineering news-record* and has had long interest in the subject of water supply

COX CHARLES RAYMOND

Laboratory control of water purification a handbook of laboratory practice in the water works plant, prepared particularly for the man who has not had the advantages of extended training in chemistry and bacteriology New York Case-Shepperd Mann Publishing Corporation 1946 386 p. illus. 21 cm. $4.00. 1687

Contents: Introduction. Principles of chemistry Dissolved oxygen and aeration. Micro-organisms, their identification and control. Control of tastes and odors. Mineral constituents of water Hydrogen ion concentration or pH value. Alkalinity Carbon dioxide Turbidity Color Residual aluminum. Coagulation. Flocculation, sedimentation and filtration Residual chlorine Free ammonia. Chlorination. Hardness. Magnesium. Softening. Iron. Manganese. Iron and manganese removal Corrosion. Bacteriology

Note The intended audience for this manual is indicated in its subtitle. The principles of water purification processes are explained and standard treatment equipment is described. Laboratory procedures for making routine tests of various qualities of water are given in detail The material appeared originally as series of articles in *Water works engineering*, but it has been reworked revised here. The book contains no index.

GARVER, HARRY L

Safe water for the farm Washington, D C Government Printing Office 1948 46 p illus. 23 cm. (United States. Department of Agriculture Farmers' bulletin no 1978) Paper $0 15 1688

Contents Importance of safe water supply Quality of water. Quantity of water required. Sources of water Ground water Springs. Wells. Surface water Pumps and pumping Water storage Pipes and pipe fittings.

Note. Superseding Farmers' bulletin 1448, *Farmstead water supply* the present bulletin was first issued in 1946 and in slightly revised form in 1948. Farmers in need of an abundant and dependable supply of water will find practical information in this pamphlet regarding the sanitary and engineering principles required to provide safe fresh water

HARDENBERGH WILLIAM ANDREW
Water supply and purification. Second edition. Scranton, Pa. International Textbook Company 1945 488 p illus. 21 cm. (International texts in civil engineering Charles Edward O'Rourke consulting editor) $6.50 1689

Contents: General considerations in planning water-supply systems. Consumption of water Rainfall Evaporation, percolation, and absorption. Surface water Ground water Storage reservoirs. Distributing reservoirs. Gravity conduits. Pipe conduits. Pipe appurtenances. Laying pipe and maintaining lines. Planning of distribution system. Hydraulics of flow Design of dead-end distribution systems. Design of continuous-flow system. Pumps and pumping. Factors in water purification. Physical tests of water Chemical analyses of water. Bacteriological examinations of water. Microscopical examination. Screening. Sedimentation and coagulation. Filtration. Disinfection. Removing dissolved minerals. Control of corrosiveness. Taste and odor control. Water for industrial uses. Typical design of treatment plant. Appendix. Index.

Note (3908) An established textbook for engineering college courses. It has strong practical slant and is therefore used also by beginning engineers and operators of water plants Special emphasis is placed on the public health aspects of the subject and on the engineering of distribution systems. In this revision selected lists of references have been added to most of the chapters, and there is new brief chapter on water for industrial purposes. Minor revisions have been made elsewhere.

HIRSCH A ADLER
Manual for water plant operators. Brooklyn Chemical Publishing Company Inc. 1945 386 p illus 22 cm. $6.50 1690

Contents. General considerations. Section 1 Procurement Ground water. Wells. Surface water Section 2 Methods of treatment General ideas and methods of water treatment. Storage Aeration. Coagulation and sedimentation. Filtration Disinfection. Section 3, Other special treatments: Iron removal. Softening Corrosion control. Taste and odor removal. Section 4 Distribution system Pumping Reservoirs. Piping and connections. Hydraulic measurement devices. Section 5 Control tests Plant arithmetic. Chemical tests. Water bacteriology Section 6, Miscellaneous Operation during emergencies Records and operator policy Useful literature. Useful water plant data and factors Index

Note. The author is an instructor in water purification with the Sectional School on Water Supply and Sewerage maintained by the State Department of Education of Louisiana and this book grew out of the need for self-instruction text to supplement the class instruction of that school. The result is compact, up-to-date survey of water plant chemistry and techniques that will be useful to many operators of small and medium-sized water-supply systems. A few practice problems are included and there are lists of books, documents, and manufacturers' literature for further reading

HOPKINS EDWARD SCOTT
Water purification control. Third edition. Baltimore The Williams & Wilkins Company 1948 289 p. illus. 20 cm. $4.00 1691

Contents: Introduction. Coagulation. Color removal Removal of iron and manganese. Sedimentation Filtration. Disinfection Taste and odors. Corrective treatment. Softening Plant control. Useful tables. Index.

Note A short, practical manual designed for waterworks operating personnel. It describes both the theory and technique of the various modern control processes, including laboratory tests References are given to additional literature for the convenience of persons who wish more advanced discussions of specific subjects. It has been extensively rewritten for the present edition. The chapters on color removal and the removal of iron and manganese are new as are many of the illustrations. The author is an engineer in the Bureau of Water Supply of Baltimore, Maryland.

PHELPS, EARLE BERNARD, AND COLLABORATING AUTHORS
Public health engineering a textbook of the principles of environmental sanitation Volume I. New York John Wiley & Sons Inc., 1948 655 p illus. 22 cm. $7.50 1692

Contents Man and his environment. Part One, The air contact Weather and climate—housing. The air supply of enclosed places. The thermal environment of the human body Heating, ventilation, and air conditioning Illumination and lighting. Atmospheric pollution—noise. Insects and insect control, by Harry D Pratt. Part Two, The water contact, with Clarence J. Velz: Hydrology Water quality Water supply Sewage disposal and the pollution and self-purification of watercourses Treatment of polluted waters—principles—domestic water supply—sewage and wastes. Rural sanitation. Appendix. Index.

Note. In order to indicate the broad scope of this text, the author has used the title "Public health engineering" instead of the more customary "Sanitary engineering. It is intended for the use of public-health officers and students who have either engineering or medical backgrounds. It presents detailed study of man's physical environment, how it may be controlled or modified, and its relationship to man's health, with emphasis on the biological and chemical aspects. It completely supersedes the author's earlier work, *Principles of public health engineering* (N Y Macmillan, 1925) in which somewhat similar scope and purpose were introduced Volume II will deal with man's food supply in relation to his health, and both volumes may be used independently

PRESCOTT SAMUEL CATE, AND OTHERS
Water bacteriology with special reference to sanitary water analysis by Samuel Cate Prescott, Charles-Edward A. Winslow and Mac Harvey McCrady Sixth edition. New York John Wiley & Sons, Inc., 1946. 368 p 22 cm. $4.50 1693

Contents (abridged) The bacteria in natural waters. The collection of samples for bacteriological examination of water Determination of the number of organisms developing at room temperature. Determination of the number of organisms developing at body temperature. Coliform organisms and methods for their detection. Differentiation of organisms of the coliform group. Significance of the presence of coliform organisms in water Other intestinal bacteria which have been used as indexes of pollution. The significance and applicability of the bacteriological examination. Bacteriology of sewage and sewage effluents. Bacteriological examination of shellfish. Appendix: Tables for obtaining the most probable number from dilution data. Index.

Note In its sixth edition, this standard work is essentially digest of the knowledge of water pollution by bacteria from extraneous sources and of the methods of testing for such pollution. The subject is treated from the public health standpoint; hence the bacteriology of harmless bacteria indigenous to water is not treated. This edition has been extensively revised. References to recent literature have been incorporated in the text, the volume has been reset, and the number of pages has been increased by about one hundred and fifty as compared to the fifth edition (1931) The bibliography contains fifty-three pages.

RYAN WILLIAM JOHN
Water treatment and purification. Second edition. New York McGraw Hill Book Company Inc. 1946 270 p. illus. 21 cm. $3.25 1694

Contents: The impurities in water Sedimentation and coagulation. Filtration. The analysis of water The lime and soda-ash process. Ion exchangers. Boiler feed-water treatment—general considerations. Boiler feed-water treatment—methods used. Disinfection of water. Tastes and odors. Miscellaneous treatments. Prevention of corrosion. Appendix. Index.

Note: (3518) A simple, descriptive manual of water treatment processes and equipment. It is designed for the instruction of engineers who are not specialists in the field, students, and operating men. Added in this edition are new discussions of the use of organic ion exchangers, the processing of boiler feed water and the stabilization of water so as to lessen the deposition of scale in pipe lines.

STEEL, ERNEST WILLIAM

Water supply and sewerage. Second edition. New York McGraw Hill Book Company Inc. 1947 666 p illus 23 cm. $6 00 1695

Contents (abridged) Introduction. Quantity of water and sewage. Rainfall and runoff Ground water Conveyance of water—materials used. Conveyance of water—collection and distribution. Pumps and pumping stations. Quality of water supplies. Self-purification of streams. Treatment of water—sedimentation and coagulation. Treatment of water—the rapid sand filter Treatment of water—the slow sand filter. Miscellaneous water treatment methods. Sewerage—definitions and general considerations. Amount of storm sewage. Sewer pipes. Flow in sewers. Sewer appurtenances. Design of sewer systems. Sewer construction. Maintenance of sewers. Characteristics of sewage. Sewage disposal. Screens and skimming tanks. Sedimentation of sewage. Sewage filtration. Activated sludge. Sludge treatment and disposal. Miscellaneous sewage treatment problems. Financing and management. Appendices Index.

Note. (3519) A comprehensive work intended for use as text by engineering students and as reference manual for practicing engineers. This edition has been revised and enlarged to include recent developments in water and sewage treatment. New sections have been added on cementing wells, break-point chlorination, the lime-soda process for softening water hydrogen zeolites and demineralizing. The appendix contains the latest standards for drinking water as established by the U S. Public Health Service in 1946. As in the previous edition, review problems are given at the end of each chapter.

UNITED STATES PUBLIC HEALTH SERVICE. SANITARY ENGINEERING DIVISION

Manual of recommended water-sanitation practice, recommended by the United States Public Health Service. Prepared by direction of the Surgeon General. Washington D C. Government Printing Office, 1946 40 p. illus. 23 cm. (United States. Public Health Service. Public health bulletin no 296) Paper $0 15 1696

Contents. Introduction. Physical features of water-supply systems and their sanitary protection. Scope of requisite information as to source and protection. Recommended sanitary requirements for water-treatment systems. Recommended general sanitary requirements for water-distribution systems. Discussion of the chemical and bacteriological requirements for potable water as exemplified by the 1946 Drinking Water Standards. References.

Note: A technical committee of U S. Public Health Service officers wrote this manual. Its primary function is to serve as guide to Public Health Service engineers in evaluating the sanitary features of water supplies with which they are concerned. In preparing it the committee took advantage of criticisms by various sanitary engineers of the earlier text which appeared in 1943 as Reprint no. 2440 from the Public health reports. The pamphlet, although it does not have the effect of law regulation, or ruling, should be useful not only to Public Health Service engineers but also to state departments of health and others concerned with water sanitation.

MECHANICAL ENGINEERING

GENERAL

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on synthetic lubricants. Fiftieth annual meeting, American Society for Testing Materials Atlantic City June 16–20 1947 Philadelphia American Society for Testing Materials, 1947 33 p illus. 23 cm. (Special technical publication no 77) Paper $1.00. 1697

Contents: "Ucon" synthetic lubricants and hydraulic fluids, by J M. Russ, Jr. Synthetic lubricants from diesters, by F J Glavis and H. R. Stringer Synthetic lubricants for military aircraft, by C. C. Singleterry

Note. The present papers, written by experts in synthetic lubricant manufacture, critically discuss the composition, properties, and uses of a number of modern organic lubricants which are not of petroleum origin. Brief reference lists are provided.

AMERICAN SOCIETY FOR TESTING MATERIALS, AND SOCIETY FOR EXPERIMENTAL STRESS ANALYSIS

Symposium on testing of parts and assemblies, presented at the forty-ninth annual meeting, American Society for Testing Materials, Buffalo N Y., June 26 1946 Philadelphia American Society for Testing Materials, 1947 86 p. illus. 23 cm. (*Technical publication no 72*) Paper $1.50 to members, $1 15 1698

Contents: Introduction, by L. L. Wyman. The fatigue strength of lap joints in some magnesium sheet alloys, by H. J Grover and L. R. Jackson. Fatigue characteristics of magnesium castings, by George H. Foard. Endurance—a criterion of design, by W T Rees. Pneumatic fatigue machines, by F B. Quinlan. Automotive test axles and means of improving their fatigue resistance, by O J. Horger and C. H. Lipson. Stress concentration and the fatigue strength of engine components, by C. Gadd, N A. Ochiltree, and A. Zasada.

Note. The principal aim of these papers is to aid in establishing rational tests that will more accurately predict the serviceability of mechanical parts before they are placed in service. Charts, diagrams, photographs of test equipment, and photomicrographs of metals are included. Each paper is accompanied by a report of the discussion of it at the meeting. The volume is directed at metallurgical and mechanical engineers.

CROCKER, SABIN

Piping handbook. Fourth edition. New York McGraw Hill Book Company Inc., 1945 1376 p illus 18 cm. $7.50 1698a

Contents: List of collaborators. List of abbreviations. Definitions, formulas, and tables. Fluids—properties of fluids. Metallurgy of piping materials. Pipe, valves, and fittings. Heat insulation. Hangers and supports. Expansion and flexibility. Steam power-plant piping. Building heating systems. Plumbing systems. Underground steam piping. Water-supply piping. Fire-protection piping. Oil piping. Gas piping. Refrigeration piping. Corrosion. Hydraulic power transmission piping. Index.

Note. (4434) The purpose of this manual is to assemble and coordinate authoritative data relevant to piping design for engineering and industrial applications. This edition has been enlarged by more than 475 pages, part of which include the new chapters on gas and refrigeration piping, hydraulic power transmission, and corrosion. Material dealing with water supply piping and flow of water in pipes has been expanded; existing codes, dimensional standards, and specifications have been revised. Previous editions were published under joint authorship with J H. Walker.

FRANKLAND THOMAS W

Simplified solution of piping offsets. Chicago Frederick J Drake & Co publishers 1947 121 p. illus. 19 cm. $1 50 1698b

Note: The problems discussed in this book are similar to those encountered by pipe-fitters and plumbers in practical work. They include such operations as calculation of angles and cut-backs for welded piping, calculation of offsets in traverls, the design of turns and equal-spread offsets, and the calculation of expansion bends. In each type of problem there are usually a drawing, a statement of the problem, a worked-out solution, and a group of exercises to be worked by the student. The appendix contains a set of trigonometry tables.

GAY CHARLES MERRICK AND CHARLES DE VAN FAWCETT

Mechanical and electrical equipment for buildings. Second edition. New York John Wiley & Sons, Inc., 1945 453 p illus. 22 cm. $5.50 1699

Contents (abridged): Section I, Water supply: Design of water supply. Hot water design and equipment—Installation of water supply. Section II, Plumbing and drainage: Plumbing fixtures and sewage disposal. Section III, Heating and air conditioning: Warm air furnace heating. Steam heating. Hot water heating. Air conditioning. Section IV, Electrical equipment: Wiring systems. Electrical machinery. Vertical transportation. Lighting. Index.

Note. (3534) This book covers the basic theories and applications of equipment used in buildings. It is intended for architects, building managers, and building superintendents, and others concerned with the selection and operation of building equipment. In this second edition there are many revisions, including new material on heating, air conditioning, elevators, lighting, and on acoustics.

HALL, JAMES DOYLE

Industrial applications of infrared. New York McGraw-Hill Book Company Inc., 1947 201 p. illus. 23 cm. $3.50 1700

Contents: Introduction. Advantages of infrared heat. The incandescent lamp as a source of infrared radiation. Radiant-heat equipment. Planning and design of infrared installation. Special application problems. Paints and other surface finishes. Industrial applications. Miscellaneous uses of infrared radiation. Appendix. Index.

Note. Except for the introductory chapter this volume is concerned entirely with the practical applications of infrared heat. The text is mainly descriptive. Approximately half the book consists of photographs and accompanying explanatory texts, which illustrate industrial and miscellaneous applications and equipment. The author is Advisory Engineer for the Lamp Division, Westinghouse Electric Corporation.

JONES, OSCAR BERNARD

Applied industrial mathematics. New York Prentice-Hall, Inc. 1947 342 p illus. 24 cm. $4 00 1701

Contents (abridged) The origin of mathematics. Division and its application. Factoring and cancellation. Signs and symbols. Fractions and mechanical advantage. Decimals, percentages, and arithmetical averages. Involution and evolution. Cube root. Ratio and proportion. Pulley and gear ratios. Tapers. Elementary algebraic equations. Polynomials. Equations and graphs. Exponents and logarithms. Binomial theorem and algebraic factoring. Quadratic equations. Elements of geometry. Ellipses. Summary of theorems and axioms. Pyramids and cones. Spheres. Solids of revolution—blank diameters. Spur gears—center of gravity. Trigonometric functions. Compound angles. Index.

Note An elementary text designed for the use of students in technical and vocational schools and for home study purposes by mechanical draftsmen, designers, and tool and die makers. The methods of applying arithmetic, algebra, geometry, logarithms, and trigonometry to the solution of machine shop problems are preceded by brief reviews of the mathematical concepts and operations involved. Worked examples and review problems are included in each chapter.

OBERG, ERIK, AND F D JONES

Machinery's handbook for machine shop and drafting-room a reference book on machine design and shop practice for the mechanical engineer draftsman toolmaker and machinist. Thirteenth edition. New York The Industrial Press 1946 1911 p illus. 18 cm. $7 00 1702

Contents (abridged) Fundamental mathematical principles and formulas. Fundamental formulas in theoretical mechanics. Strength of materials. Wire and sheet-metal gages. Ball and roller bearings. Keys and keyways—splines. Clutches and couplings. Cam design and cam milling. Planetary gearing. Belts and pulleys. Bolts, nuts, screws, nails and spikes. Screw thread systems. Measuring instruments and gaging methods. Tapping and thread cutting. Simple, compound and differential indexing. Taps and threading dies. Punches, dies and press work. Jigs and fixtures. Grinding and grinding wheels. Cutting fluids. Iron and steel manufacture. Patterns. Die-casting. Electric welding. Chromium plating. Heat-treating processes. Powdered metal process. Properties and weights of materials. Pipe and pipe fittings. Electric motor standards. Weights and measures.

Note (1528) The thirteenth edition of this useful compilation of information and data relating to machine design and machine shop practice contains nearly one hundred pages more than its predecessor. Most of the new material is concerned with new or revised engineering standards, general engineering information, and recent design and manufacturing procedure. The work is standard reference tool for mechanical engineers, designers, draftsmen, toolmakers, and machinists.

WAGENER, ALBERT M AND HARLAN R. ARTHUR

The machinists' and draftsmen s handbook. New York D Van Nostrand Company Inc., 1946 622 p illus. 21 cm. $5 50 1703

Contents Symbols and mathematics. Parts of the circle. Areas. Volumes. Geometrical constructions. Weights and measures. Trigonometry. Drills. Threads. Spur gearing. Milling tables. Tapers. Miscellaneous tables. Speeds, feeds, and cutting tools. Dies and presses. Metals. Strength of materials. Mechanics. *Logarithms.* Index.

Note. A compact reference work designed to provide the basic information required by machinists and draftsmen in most of their routine assignments. It contains tables, charts, terminology for males, and directions for calculating standard problems in shop mathematics. The last one-third of the book represents revision from Peder Lobben's *Machinists' and draftsmen's handbook* New York Van Nostrand, 1899. The senior author is Instructor of Shop Theory in the Henry Ford Trade School Dearborn, Michigan.

MECHANICS

BLACK, PAUL HOWARD

Machine design. New York McGraw Hill Book Company, Inc., 1948 357 p. illus. 24 cm. $4.00 1704

Contents Introduction. Materials and processes. Machine-design computations. Loading and induced stresses. Stress concentration in machine members. Allowable stresses. Members that fail by buckling. Mechanical fabrication. Detachable fastenings. Springs. Pressure cylinders. Translation screws. Shafting. Belt drives and belts. Power-transmission chains. Shaft couplings. Clutches and brakes. Spur and parallel helical gears. Gears for nonparallel shafts. Surface finish, friction, and wear. Sliding bearings and lubrication. Ball and roller bearings. Metal fits and tolerances. Vibration and vibration control. Appendix. Questions and problems. Author index. Subject index.

Note: This text is written for advanced engineering students who have background knowledge of mechanics, strength of materials, and related topics. Stresses and strains in machine parts are discussed at some length, but the greater part of the volume deals with the designing of specific machine elements. The author is Professor of Machine Design at Cornell University

BRADFORD, LOUIS JACQUELIN AND PAUL B EATON

Machine design. Fifth edition. New York John Wiley & Sons Inc. 1947 283 p. illus. 22 cm. $3.25 1705

Contents: Fundamental definitions and considerations. Friction and lubrication. Bearings and sliding surfaces. Friction clutches and brakes. Shafts. Force and shrink fits. Screws and screw fastenings. Toothed gearing. Belts and chains. Springs. Flywheels. Miscellaneous machine elements. Tables. Index.

Note A college textbook designed for use in short, intensive courses in machine design. It includes, therefore, only part of the data found in more extensive texts, but it does aim to give the student reasonably good background, and to help him to analyze and solve problems. Most of the revision in the current edition relates to the fatigue of metals and to new ideas concerning friction and lubrication. The problems presented by the use of aluminum in machine parts are discussed.

CONSIDINE DOUGLAS MAXWELL

Industrial weighing. New York Reinhold Publishing Corporation 1948 553 p. illus. 23 cm $10.00 1706

Contents Introduction. Part I, Scale design, construction, and operation. Fundamentals of scale mechanics. Theory of scale operation. Scales for basic weighing. Printing and counting scales. Automatic weighers. Design considerations. Selection, installation, and maintenance. Part II, Scales in the industries: Mining, machinery and metal products. Chemical industries. Public works, service, and transportation industries. Food industries. Textile and paper industries. Rubber and plastics industries. Glossary of scale terms. Appendix. Index.

Note The literature on scales has been limited for the most part to small aspects of the subject. Here is probably the only recent, comprehensive survey in any language. Its scope is the current types of industrial scales and the ways in which they are used in contemporary American industry. It is copiously illustrated and well documented. About 1,391 terms are defined in the glossary. The work will appeal chiefly to those associated with the scale manufacturing industry and to others concerned with industrial processes in which products must be weighed, but it is of interest also to inventors and other persons interested in mechanisms.

GIBBS JOSIAH WILLARD

The early work of Willard Gibbs in applied mechanics comprising the text of his hitherto unpublished Ph.D thesis and accounts of his mechanical inventions Assembled by Lynde Phelps Wheeler, Everett Oyler Waters, & Samuel William Dudley New York Henry

Schuman, 1947 78 p. illus. 24 cm. (Yale University School of Medicine. Historical Library Publication no 17) $3 00 1707

Contents: Preface, by John F Fulton. Introduction by Lynde Phelps Wheeler On the form of the teeth of wheels in spur gearing, by Willard Gibbs, dissertation submitted to the Sheffield Scientific School in fulfillment of the requirements for Ph.D degree in 1863. Commentary upon the Gibbs monograph "On the form of the teeth of wheels in spur gearing, by Everett Oyler Waters. An improved railway car brake, by Samuel William Dudley The Gibbs governor for steam engines, by Lynde Phelps Wheeler

Note: The centennial anniversary of the Sheffield Scientific School, Yale University in 1947 was the occasion for the publication of this book by and about Willard Gibbs, the distinguished Professor of Mathematical Physics at Yale University from 1871 until his death in 1903. It reproduces his Ph.D. thesis (Gibbs was one of the earliest recipients in the United States of the Ph D degree) and gives accounts of two other early contributions by Gibbs in the field of applied mechanics. The three editors are members of the Yale faculty

HELDT PETER MARTIN

Torque converters or transmissions, for use with combustion engines in road and rail vehicles tractors and locomotives mechanical, hydraulic, electric, pneumatic, differential stepped and continuously variable, hand-controlled automatic and semi-automatic. Third edition. Nyack, N Y P M Heldt, 1947 438 p. illus. 22 cm. $6 00 1708

Contents: Introduction. Friction clutches. Automatic clutches. Hydraulic and electric couplings. Overrunning clutches. Some principles of toothed gearing. Sliding-gear and constant-mesh transmissions. Bearing loads in geared transmissions. Planetary transmissions. Electric drive. Hydrostatic transmissions Hydro-kinetic torque converters. Differential or power-shunt transmissions. Inertia-type transmissions. Variable-throw transmissions. Automatic and power controlled stepped transmissions. Pneumatic transmissions. Geared transmissions for different services. Index.

Note. (1941b) Automotive transmission devices from the early sliding gear to recent automatic types are described and their principles are explained in this work. Both American and foreign mechanisms are covered. The text is supplemented by generous number of illustrations that show sections and assembly details. In the present edition errors discovered in the earlier editions have been corrected; and there are about fifteen pages of new material, mainly on hydrokinetic and inertia transmissions.

MACCONOCHIE, ARTHUR FRANCIS

Kinematics of machines. New York Pitman Publishing Corporation, 1948 217 p. illus. 24 cm. $3.00 1709

Contents. Some simple machines in history The elements of mechanism. Geometry in mechanism Velocity Velocity in mechanism Acceleration. Acceleration in mechanism. Kinematics of simple machine elements. Index

Note: An introduction to the basic principles and theories underlying the construction and operation of machines. The theoretical aspects of the subject are stressed, and the nature of the motion of machine parts and the magnitude of the forces involved are examined in detail. Practical applications are illustrated largely by the problems given at the end of each chapter. The book is intended for use by second- and third-year engineering students who have had course in elementary mechanics

MALEEV VLADIMIR LEONIDAS

Machine design. First edition (revised) Scranton, Pa. International Textbook Company 1946 581 p illus. 23 cm. (International texts in mechanical engineering, Charles Fayette Taylor consulting editor) $6.50 1710

Contents. Introduction. Stresses in machine parts Properties of materials. Machine design calculations. Screw fastenings. Keys, pins, and cotters. Press, shrink, and friction joints. Riveted joints. Welded joints. Design of castings. Chains and ropes. Brakes. Screws for power transmission. Cylinders, heads, and cover plates. Packings and seals. Leaf springs. Helical springs. Shafts. Couplings and positive clutches. Friction clutches. Bearings with sliding contact. Bearings with rolling contact. Crankshafts. Flywheels. Belt drives. Chain drives. Friction gearing. Toothed spur gearing. Toothed bevel gearing. Worm gearing. Screw gearing Appendices: Problems. Rational design of clips. Index.

Note This successful engineering college textbook has been especially designed to prepare students to design the relatively lightweight, high-speed machinery demanded by modern industry The author has made particular effort to base it on the latest data available on the properties of modern engineering materials and on the influence of loads, temperature, etc. on stresses that are developed in working parts. The major change in this revision of the first edition is the addition of an eleven-page section on screws with ball nuts which is appended to the thirteenth chapter Other more minor revisions are scattered throughout the book.

MAURER, EDWARD ROSE, AND OTHERS

Mechanics for engineers statics and dynamics by Edward R. Maurer Raymond J Roark, and George W Washa. New York John Wiley & Sons Inc. 1945 425 p illus. 22 cm. $4 00 1711

Contents Force and force systems. Composition and resolution of forces Forces in equilibrium. Simple frameworks. Friction. Center of gravity and centroid. Cables. Rectilinear motion. Curvilinear motion. Rotation of rigid body Plane motion of rigid body D'Alembert's principle. Work; power energy Momentum and impulse. Three-dimensional (or solid) motion of rigid body Appendix Systems and dimensions of units. Moment of inertia and radius of gyration. Mechanical vibrations. Problems. Tables. Index.

Note. This new revision of long-established engineering college text (the first edition was published in 1903) has been reset and almost completely rewritten as compared to the fifth edition (1938) Topics introduced for the first time are virtual work and mechanical vibrations; topics amplified or treated in new way include dynamics, plane motion and relative motion, and d'Alembert's principle. Many new problems are introduced and answers are now furnished for some of the more difficult ones Throughout sentences and paragraphs have been revised and re-worded for the sake of clarity Earlier editions were entitled *Technical mechanics*.

SAHAG LEON MARR

Kinematics of machines. New York The Ronald Press Company 1948. 249 p. illus. 24 cm. $4.00 1712

Contents Fundamental conceptions. Motion in machines. Instant centers. Linear and angular velocities. Acceleration in machines. Velocity and acceleration diagrams. Cams. Rolling friction surfaces. Gears. Gears on intersecting and nonintersecting shafts. Gear trains. Flexible links. Other useful mechanisms. General instructions for drawing-room problems. References. Index.

Note. As the needs for complex, efficient and highspeed machinery have increased, so have the demands upon the basic knowledge of machine designers. This text is intended for use in introductory but thorough courses offered to mechanical engineering students. The fundamental physics is covered first, then the elemental mechanisms or "links" are discussed. An outstanding feature is that problems in accelerations and velocities are solved graphically rather than by analytical mathematics. Because of this, the book should be useful to those persons who must study the subject outside of organized courses.

SCHWAMB PETER, AND OTHERS

Elements of mechanism by Peter Schwamb Allyne L. Merrill and Walter H. James revised by Venton Levy Doughtie. Sixth edition. New York John Wiley & Sons, Inc., 1947 428 p illus 23 cm. $4.00 1713

Contents: Notation and symbols. Introduction. Motion. Vectors. Velocity analysis. Acceleration analysis. Linkages. Transmission of motion by direct contact. Cams. Bodies in pure rolling contact.

Gears and gear teeth. Wheels in trains. Belts, ropes, and chains. Miscellaneous mechanisms. Laboratory problems. Index.

Note (1551) The first edition of this text, prepared by Peter Schwamb, Professor of Machine Research at M. I. T appeared in 1885. Since that date, two other professors of mechanical engineering at M. I. T have collaborated in the preparation of succeeding editions. The present reviser is Professor of Mechanical Engineering at the University of Texas. The book deals with the fundamental laws and principles governing mechanical movements, and their application to various types of mechanisms, and is chiefly used in introductory courses in engineering colleges. The present revision involved rewriting three chapters and rearranging the chapter sequence.

SOCIETY OF AUTOMOTIVE ENGINEERS, INC. WAR ENGINEERING BOARD

Manual on design and application of helical and spiral springs for ordnance. Second edition. New York Society of Automotive Engineers Inc., 1945 38 p illus. 28 cm. Paper $3.00 1714

Contents: Introduction. Fundamental considerations Factors of importance in spring design. Spring materials and maximum design stresses. General spring tolerances. Spring design formulas. Appendix.

—— Manual on design and application of leaf springs. New York Society of Automotive Engineers, Inc., 1945 89 p illus. 28 cm. Paper $4 00 1715

Contents General data. Nomenclature and specifications Design elements. Design calculations Interleaf friction. Materials. Flat springs.

—— Manual on design and manufacture of torsion bar springs. New York Society of Automotive Engineers Inc., 1947 30 p illus 28 cm. Paper $3 00 1716

Contents Introduction. Design calculations Design of end fastening Processing.

—— Manual on design and manufacture of volute springs. New York Society of Automotive Engineers, Inc. 1945 25 p illus. 28 cm. Paper $2 00 1717

Content Introduction. Manufacture. Design Supplement.

Note Each of the above manuals presents basic data and formulas which will be of value to engineers and mechanics concerned with the design, construction and uses of various types of springs. Although the methods outlined are based on the findings of engineers and manufacturers, they are intended to be suggestive rather than mandatory

SPOTTS MERHYLE FRANKLIN

Design of machine elements. New York Prentice-Hall Inc. 1948 402 p illus 24 cm. $6.65 1718

Contents Fundamental principles Stress concentration and repeated loading Theory of torsion Springs Screws Belts, brakes, and clutches. Welded and riveted connections Lubrication Ball and roller bearings Spur gears. Helical, bevel, and worm gears. Miscellaneous machine elements. Dimensioning and details. Engineering materials. Appendix. Index

Note A college text designed primarily for use by senior engineering students, but which is mature enough in treatment to be of value to some practicing engineers. Emphasis is placed on the fundamental principles required for the design of separate machine elements, rather than of complete machines. A brief review of the theory of strength of materials and of the properties of engineering materials is included, and useful data regarding stress factors, coefficients of friction, standard dimensions, etc., are tabulated throughout the book. Illustrative exercises and review problems are given in each chapter

CONTROLS AND SERVOMECHANISMS

BORDEN PERRY ARCHIBALD, AND G M THYNELL

Principles and methods of telemetering. New York Reinhold Publishing Corporation 1948 230 p. illus 23 cm. $4.50 1719

Contents: Introductory Current or conductance systems. Voltage systems of telemetering Frequency systems of telemetering. Position systems of telemetering. Impulse systems of telemetering—principles. Examples of telemetering systems in the impulse class. Interconnecting circuits and channels. Carrier current. Coordinating, totalizing, computing, and integrating. Remote reading of dials and registers. Selection and application of telemetering systems. Appendix Fluid telemetering. Bibliography Registered names and trade marks. List of patents in telemetering and allied fields. Index.

Note In their preface the authors of this work modestly disclaim originality and refer to themselves as compilers. Nevertheless, they have produced compact survey of their subject such as has not existed before. Both are associated with the Bristol Company but the instruments of all manufacturers are discussed on the same basis. The exposition is descriptive, and no attempt is made to discuss mathematical aspects The list of patents although admittedly incomplete runs to twenty-three pages.

BROWN, GORDON STANLEY, AND DONALD P CAMPBELL

Principles of servomechanisms dynamics and synthesis of closed loop control systems. New York John Wiley & Sons, Inc., 1948 400 p illus. 24 cm. $5.00 1720

Contents. Outline of subject. Dynamics of elementary control systems. Transient response using the Laplace transform. Sinusoidal response of closed-loop systems. System diagrams, equivalent circuits, and block diagrams. Introduction to synthesis, determining the gain constant *K*. Methods of *G* function synthesis—linear coordinates. Methods of *G* function synthesis—logarithmic coordinates. Systems subjected to multiple disturbances. Experimental studies in servomechanisms. Method for approximating the transient response from frequency response. Table of SIN /x. Problems. Bibliography Index.

Note An important addition to the literature of servomechanisms. It is designed primarily for senior and graduate engineering students but, since it is written from fresh viewpoint and contains some material not published hitherto, it will be of interest to persons already engaged in research and engineering design. The treatment is chiefly mathematical, and there is virtually no discussion of mechanical components of control systems such as motors, relays, etc. Both authors are members of the faculty at Massachusetts Institute of Technology and the first-mentioned is Director of its Servomechanisms Laboratory

ECKMAN DONALD P

Principles of industrial process control. New York John Wiley & Sons, Inc., 1945 237 p illus. 22 cm. $3 75 1721

Contents The art and science of control. Measuring means of industrial controllers. Characteristics of measuring means. Modes of automatic control. Final control elements Process characteristics. Theory of automatic control. Quality of automatic control. Application control engineering Automatic control systems. Maintenance of exact control. Glossary of terms used in automatic control. Index.

Note. An introductory treatment, for engineering students and others with considerable technical education, of the basic principles of servomechanisms and automatic controls. The theory of the subject is treated in considerable detail, and is illustrated with diagrams of ideal control mechanisms and with graphs. Some practical aspects of the subject, such as maintenance and servicing of control systems, are discussed briefly Chapter bibliographies are included The author is connected with the engineering department of the Brown Instrument Company division of the Minneapolis-Honeywell Regulator Company

FELLER, EUGENE W F

Instrument and control manual for operating engineers. New York McGraw Hill Book Company Inc. 1947 426 p illus. 21 cm. $6.00 1722

Contents: Simple liquid-level instruments. Pressure elements. Head meters for liquid level, pressure and flow. Temperature elements. Characteristics of motor-operated valves. Self-operated pressure valves. Temperature valves. Hygrostats and psychrometers. Control mechanisms. Control systems. Controller applications. Emergency instruments. Feed-water control. Mechanical governors. Hand valves and piping. Traps and condensate systems. Appendix. Index.

Note: More than 450 illustrations, most of them being reproductions of line drawings, are contained in this small book. Both the illustrative matter and the text are remarkably well adapted to the group of readers for whom the book is designed. Principles and uses of the instruments are explained rather fully from the practical viewpoint. Typical mechanisms are shown in diagrams, and there is some incidental material on maintenance.

JAMES, HUBERT MAXWELL AND OTHERS, editors

Theory of servomechanisms edited by Hubert M. James, Nathaniel B Nichols and Ralph S Phillips. Office of Scientific Research and Development, National Defense Research Committee. New York McGraw Hill Book Company Inc., 1947 375 p illus. 23 cm. (Massachusetts Institute of Technology Radiation Laboratory series Louis N Ridenour editor in-chief Vol. 25) $5 00 1723

Contents: Foreword, by L. A. DuBridge. Servo systems. Mathematical background. Servo elements. General design principles for servomechanisms. Filters and servo systems with pulsed data. Statistical properties of time-variable data. RMS-error criterion in servomechanism design. Applications of the new design method. Index.

Note: A description of the *Radiation Laboratory series* as a whole will be found under number ___ in this bibliography. Although the present volume is related to the military applications of radar, it has a broader scope and is of general interest to all designers of servomechanisms. It was derived not only from the work of the Radiation Laboratory but also from contributions published elsewhere. The general problems and theories of servomechanism design are dealt with, but the book's special quality lies in its approach to the problem from the viewpoint "of designing the best possible servo system of a given order of complexity to meet a given need.

LAUER, HENRI AND OTHERS

Servomechanism fundamentals, by Henri Lauer Robert Lesnick, and Leslie E Matson New York McGraw Hill Book Company Inc., 1947 277 p illus. 23 cm. $3.50 1724

Contents: Elementary forms of control systems. Servo systems follow-up links. Fundamentals of mechanics and electricity. Analysis of servomechanisms with viscous output damping. Analysis of servomechanisms with error-rate damping. Analysis of servomechanisms with combined viscous output damping and error-rate damping. Error-rate stabilization networks. Analysis of servomechanisms with integral control. Transfer function analysis of servomechanisms. Typical design calculations and general considerations. Index.

Note: With the increasing use of automatic control and remote control in industry there has arisen a need for books that explain the principles of servomechanisms. This book is designed as an introduction to the subject for both engineering students and graduate students. The most of the book is in the thorough treatments of analyzing by the transient analysis method, the design and performance of various fundamental types of servomechanisms. One chapter has been included principally for comparison purposes. This is the chapter devoted to the transfer function method of analysis. The principles of follow-up links such as differential gears, translating devices and synchro motors and generators are outlined, but there is no attempt to cover the design of servomechanism components such as motors, gears, and other mechanical parts. The authors are all of the Engineering Department, RCA Victor Division, Radio Corporation of America.

MACCOLL, LE ROY ARCHIBALD

Fundamental theory of servomechanisms. New York D Van Nostrand Company Inc., 1945 130 p illus. 24 cm. $2 75 1725

Contents: Introduction. Description and rudimentary theory of particular servomechanism. Elements of the steady-state theory of the servomechanism. Auxiliary formulas from the theory of transients in linear systems. Stability of servomechanisms: Nyquist' criterion. Performance of a particular servomechanism. Servomechanisms with more complicated feed-back paths. Servomechanisms with alternating current motors and oscillating control servomechanisms. Sampling servomechanisms. Alternative approaches to the theory of linear servomechanisms. Appendix: Study of a simple on-off servomechanism. Bibliography. Index.

Note: A mathematical exposition of the basic principles that govern the design of servomechanisms. The similarity to the theory developed for feedback amplifier design is pointed out; and the application of this theory—which is highly developed in Bode' *Network analysis and feedback amplifier design* (See Index)—can be applied to the design of stable servomechanisms. The work is intended for mathematicians and graduate engineers, hence the exposition is largely in mathematical terms. The author is a member of the technical staff of the Bell Telephone Laboratories.

MECHANICAL DRAWING

ALBERT CALVIN DODGE

Machine design drawing room problems. Fourth edition. New York John Wiley & Sons, Inc. 1948 519 p illus. 24 cm. $5.00 1726

Contents: Introductory discussion. [illegible] Form factor and strength of gear teeth. [illegible] transmission. Valve gear of Diesel engine [illegible] shafts. Curved parts and frames. [illegible] bearing. Steam engine flywheel. Air-operated [illegible] operated industrial brake. Car puller [illegible] features of [illegible] crane. Cam [illegible] problems. Engineering materials. Allowable [illegible] testing loads. Straight and helical spur gears [illegible] fits. Tolerances and allowances for metal [illegible] and screw fastenings. Miscellaneous information [illegible] Index.

Note: The purpose of this advanced text is to teach [illegible] of machine design through the application of [illegible] drawing methods. Essentially it deals with [illegible] are carried out in the drafting department [illegible] Each chapter is complete in text and data [illegible] problems connected with the design of [illegible] machine or machine part. The book is prepared for [illegible] graduate engineering courses and the [illegible] student have a prior knowledge of mechanics and [illegible] In this edition several of the problems have [illegible] new chapters dealing with the design of [illegible] transmissions, and valve gear [illegible] been added.

CARINI LOUIS FRANK BARTHOLOMEW

Drafting for electronics New York McGraw-Hill Book Company, Inc., 1946 211 p illus. 23 cm. $2.50. 1727

Contents: Schematic drafting. Fundamentals of [illegible] Essentials of lettering. Abbreviations and [illegible] metry and balance. Schematic [illegible] Schematic patent drawing. [illegible] outline drawings. Graphic [illegible] paring drawing prints. Drawings for [illegible] of visual aids. Index.

Note: Students and draftsmen who are [illegible] drawing often need supplementary [illegible] electronics drafting which is [illegible] symbols. This book provides this [illegible] contains also a review of [illegible] persons who are beginning [illegible] useful data such as the R. M. A. [illegible] resistors, standard wire gages and [illegible] electrical units are given in the appendix [illegible]

FRENCH, THOMAS EWING

A manual of engineering drawing for students and draftsmen revised by Charles J Vierck *with the assistance of* Charles D Cooper Paul E Machovina, Ralph S Paffenbarger, and Hollie W Shupe. Seventh edition. New York McGraw Hill Book Company, Inc. 1947 694 p illus. 24 cm. (The French drawing series) $4 00 1729

Contents (abridged) The selection of instruments. The use of instruments. Lettering. The theory of projection drawing. Auxiliary views Sections and conventions. The drawings and the shop. The dimensioning of machine drawings. Bolts, screws, keys, rivets, and springs. Working drawings. Welding drawings. Gears and cams. Jigs and fixtures. Technical sketching. Pictorial sketching. Perspective drawing. Pictorial representation. Illustration. Aircraft drawing. The elements of architectural drawing. The elements of structural drawing Map and topographic drawing. Charts, graphs, and diagrams. Bibliography of allied subjects Appendix. Appendix index. Glossary of shop terms for draftsmen Glossary of structural terms for draftsmen. Supplementary visual materials. Index.

Note (1363) The scope and purpose of this well-known text have not been altered in this first revision prepared by others than the original author Again, it is intended to meet the needs of students in all branches of engineering, and to serve as reference work for graduate engineers. Latest engineering practices have been taken into account. The chapter on illustration incorporates the earlier sections on drawing for reproduction and shade line drawing. The chapter on dimensioning of machine drawings, which is new represents an amplification of part of the former chapter on dimensions and notes Other changes consist of the complete rewriting of the chapter on perspective, revised bibliography the indexing of tables, and the listing of educational films and filmstrips, some of which have been expressly designed by this publisher as auxiliary teaching aids to accompany this textbook.

FRENCH THOMAS EWING AND CARL L SVENSEN

Mechanical drawing a text with problem layouts Fifth edition revised and enlarged by Carl L Svensen. New York McGraw Hill Book Company Inc. 1948 437 p illus. 23 cm. $2.80 1730

Contents: The language of drawing. Learning to draw Lettering Theory of shape description. Sketching. Sections Auxiliary views and revolutions Principles of size description. Technique of the finished drawing Bolts, screws, and other fastenings Mechanical drafting. Pictorial drawing. Production illustration Aircraft drafting. Welding drawings. Graphic solutions. Cams and gears Sheet metal drafting. Architectural drafting Structural drafting Map drafting. Problems. Appendix. Index

Note In the present edition this long-established text for high-school and vocational school courses has been practically rewritten. The number of pages has been increased by 118, many new illustrations have been added and the chapters on pictorial drawing, production illustration, aircraft drawing, and welding drawing are new in this edition. The book now provides an exceptionally thorough introduction to the techniques of mechanical drawing

HOELSCHER RANDOLPH PHILIP AND OTHERS

Industrial production illustration for students draftsmen and illustrators by Randolph Philip Hoelscher Clifford Harry Springer and Richard F Pohle. Second edition. New York McGraw Hill Book Company Inc. 1946 243 p illus. 28 cm. $5 00 1731

Contents Uses of pictorial drawing Lettering. Orthographic projection. Orthographic sketching. Axonometric projections—conventional construction. Axonometric projection—exact method. Axonometric sketching. Oblique projection. Sketching in oblique Perspective. Shades and shadows in perspective. Perspective sketching. Shading. Special equipment for making pictorial drawings. Problems. List of visual aids. Index.

Note. (1368) During World War II, three-dimensional sketches and drawings were found to be valuable aids in the rapid instruction of beginning workers untrained in the reading of blueprints. This work, first published in 1943 is one of the pioneer American texts on the subject. It is designed to impart thorough understanding of the theory of perspective and other types of pictorial illustration and to introduce the reader to the practical techniques that have been developed for the economical production of such illustrations. This edition is greatly improved over the original edition. The text has been set in type, new illustrations and considerable amount of textual material added.

HOOD GEORGE JÜSSEN

Geometry of engineering drawing descriptive geometry by the direct method. Third edition. New York McGraw Hill Book Company, Inc., 1946 362 p illus 24 cm. $3 00 1732

Contents Introduction Principal views. Views and their relations. Auxiliary views. Oblique views. Design of structures. Straight lines. Curved lines. Planes Intersection and development of surfaces. Single curved surfaces Warped surfaces. Double curved surfaces. Topographical and mining problems. Pictorial views. The projection method. Problems. Index.

Note (189) A second-year college textbook for engineering students based on the method of three-dimensional visualization of the structure or object as opposed to the method of projections, ground lines and traces of planes. The student is taught to view and make drawings as if they were the objects themselves This edition has been slightly enlarged by the inclusion of some new material, such as chapter on views and their relations, and by the addition of photographs of engineering structures which illustrate the applications of descriptive geometry The large collection of problems has been revised with new ones added and others deleted.

KATZ HYMAN H.

Aircraft drafting. New York The Macmillan Company 1946 386 p illus. 29 cm. $5.00. 1733

Contents: The airplane Drawing instruments and their use. The scales and their use. The alphabet of lines. Lettering. Applied geometry Orthographic projection. Making drawing. Auxiliary views. Sectional views. Dimensioning Pictorial drawing. Production changes in aircraft drawings. Materials in aircraft. Machines and processes. Fasteners. Standard parts Dash numbers, Bill of materials Calculation of weights. Lofting Design. Index.

Note: A basic textbook and reference manual which assumes no previous drafting experience and which emphasizes the close relationship of engineering to drafting. In addition to the usual fundamentals of drafting, the specialized pictorial drawing methods, [illegible] procedures, and lofting techniques peculiar to the airplane industry are presented. The various aircraft manufacturing operations, such as die-stamping, casting, machining, welding and riveting, are described as an aid to the beginning draftsman. The volume is profusely illustrated. The author is an experienced aircraft design engineer now Director of the Institute of Technology Allied School of Mechanical Trades, Inc.

LUZADDER, WARREN JACOB

Fundamentals of engineering drawing *for technical students and professional draftsmen.* Revised edition New York Prentice-Hall, Inc., 1946 623 p illus 24 cm. $5.00. 1734

Contents Drawing materials and equipment. Use of instruments and equipment. Engineering geometry Technical lettering The theory of projection. Multiview drawing. Freehand drafting. Sectional views. Conventional practices and representations in orthographic drawing. Auxiliary views. Revolution Ink work and tracing. Dimensioning. Screw threads and fasteners Shop processes. Working drawings. Piping drawings. Welding Machine elements. Pictorial drawing. Developments and intersections. Structural drafting. Topographic and engineering map drawing. Engineering graphs, charts, and diagrams. Reproduction and duplication of engineering drawings. Shade lining and surface shading. Patent Office drawings. Appendix. Index.

Note. (1571) Primarily text for college engineering students, but sufficiently comprehensive for practical draftsmen. In this edition

many pictorial and pencil-shaded drawings have been added to the hundreds of excellent illustrations which form a valuable adjunct to the textual material. Because of the clear manner of presentation and the inclusion of problems, a glossary, a brief bibliography and technical data regarding sizes of standard parts, the volume also has value as a self-teaching text.

RADZINSKY HARRY

Making patent drawings most of the drawings by the author and Julius H. Lutz. New York The Macmillan Company, 1945 96 p. illus. 26 cm. $3.00 1735

Contents: The patent drawing. Drawing materials. Shading. How much to show. Number of sheets and arrangement of views. Cross-sectional lining and unusual surface indications. Reference characters. Making the drawing. Examples of draftsmanship. Miscellaneous aids to the draftsman. Reasons for rejection. Drawings for design patents. Trade-mark drawings. Appendix: Rules of the United States Patent Office relative to drawings. Rules of the Patent Office relative to trade-mark drawings. Index.

Note: The United States Patent Office has established rules and regulations for making the drawings that are to accompany applications for patents and trademarks. The purpose of this book is to acquaint the already experienced draftsman with these regulations and to show him how to follow them in turning out both simple and complex drawings that will be acceptable to the patent examiners. The author himself is an experienced patent draftsman and patent attorney

STREET WILLIAM EZRA

Technical descriptive geometry New York D Van Nostrand Company Inc. 1948 179 p. illus. 25 cm. $2 75 1736

Contents: Orthographic projection. Primary auxiliary views. Successive auxiliary views. Revolutions. Developments. Intersections. Perspective. Shades and shadows. Vector diagrams. Index.

Note: A text for the engineering student who has had at least one semester of drawing. Geometry as applied to the structure of machines and to geology is explained, using methods of progressive complexity. Many problems of a practical nature are included. "The Notation and Nomenclature Committee Report of the Drawing and Descriptive Geometry Division of S. P. E. E. (now A. S. E. E.) for descriptive geometry has been adopted. The text, illustrations and problems are in conformity with the American Standards. The author is Chairman of the Department of Engineering Drawing of the Agricultural and Mechanical College of Texas.

SVENSEN CARL LARS

Machine drawing· a text and problem book for technical students and draftsmen. Third edition. New York D Van Nostrand Company Inc. 1945 280 p illus. 23 cm. $3.00 1737

Contents: Elementary principles. Threaded fastenings. Welded and riveted construction. Principles and practice of dimensioning. Machine drawing. Machine sketching. Machine details. Bearings. Pulleys, belts, etc. Shafting and couplings. Jigs, fixtures, and details. Gears and cams. Piping drawings. Problems and studies. Supplementary problems. Appendix.

Note: The material in this excellent book is designed to supplement the contents of the typical college course in engineering drawing. It may be used in formal courses or for self-instruction or reference by persons already employed who have had an introductory course. The subject is covered with a fair degree of comprehensiveness. There are more than 430 illustrations, approximately 400 problems, and many tables of reference data.

TREACY JOHN

Production illustration the techniques and applications of perspective engineering drawings. New York John Wiley & Sons, Inc. 1945 202 p. illus. 23 cm. $4 75 1738

Contents: Part I: Introduction. Drafting standards and practices. Shading techniques. Reproduction aids. Reproduction methods for distribution. Photographic illustrations. Linear perspective. Free hand drawing. Part II: General uses of illustrations. The introduction of production illustration. Organization of an illustration department. General reference illustrations. Perspective engineering drawings. Manufacturing illustrations. Miscellaneous applications. Appendix: The perspective drawing board. Function illustration. Prepared shading mediums and symbols. Instruction in production illustration. Index.

Note: An excellent presentation of the relatively new techniques used in the production of perspective drawings for use in industry together with a survey of the uses of such illustrations. The treatment is practical and on the level of persons engaged in the making and use of production illustrations. The book is also suitable for use in college and vocational school courses.

VAN GIESON D WALTER

Electrical drafting applied to circuits and wiring New York McGraw Hill Book Company Inc. 1945 140 p illus. 22 cm. $2.00 1739

Contents: Symbols. The schematic diagram. Modern methods. The detailed wiring plan. Circuit and wiring plans—lighting—call-way signals—communication—radio and television—power. Switchboard-wiring plans. Car-wiring plans. Ship-wiring plans. Aircraft-wiring plans. Traffic-signal wiring plans. Animated-sign lighting. Neon and fluorescent lighting. Instruments and indicating devices. Checking the wiring plan. Equipment-location plans. Conduit and location plans. Notes and specifications. Drawing titles, subtitles, etc. Alterations and revisions to drawings. Office practice. Drafting kinks. Appendix. Index.

Note: A practical exposition of the subject. It is intended for engineers, draftsmen, electricians, and others who already know the fundamentals of drafting but who need more knowledge of the special technique of drawing electrical circuits than is offered in general textbooks.

TOOLS

BLOOM, RAYMOND R.

Principles of tool engineering. New York McGraw Hill Book Company Inc. 1946 234 p illus. 23 cm. $2.80 1740

Contents: Systems of production. Interchangeability. Dimensioning. Tool engineering. Relationship. Analysis. Machine tools. Milling machines. Milling fixtures. Locating and clamping. Drilling machines. Drill jigs. Drill jig bushings. Materials. Horizontal turret lathes. Inspection. Gages. Problems in tool engineering. List of visual aids. Index.

Note. An elementary text designed for the instruction of workers in industry and vocational school students. The treatment assumes an understanding of machine drawing and of the types and uses of machine tools. There is considerable emphasis on tolerances for interchangeability, the use of gauges, and the purposes of inspection. The author is Assistant Professor of Industrial Engineering at Pennsylvania State College.

BRYANT LELAND ADAM AND T A. DICKINSON

Jigs and fixtures for mass production. New York Pitman Publishing Corporation, 1947 222 p. illus. 23 cm. $3 75 1741

Contents: The need for jigs and fixtures. Tooling procedures. Designing jigs and fixtures. Types of jigs and fixtures. Master tools. Master tooling dock. Construction of jigs and fixtures. Pneumatic and hydraulic mechanisms. Plastics. Miscellaneous jigs and fixtures. Glossary. Appendix. Index.

Note: A reference work for production engineers and machinists. In addition to describing typical jigs and fixtures and their uses, the authors trace the history of these devices and indicate their importance to industry as a whole as well as to the individual shop. The appendix tabulates useful shop data such as wire gage dimensions, drill sizes, etc.

COLVIN FRED HERBERT, AND LUCIAN L. HAAS

Jigs and fixtures a reference book showing many types of jigs and fixtures in actual use, and suggestions for various cases. Fifth

edition. New York McGraw Hill Book Company Inc., 1948 410 p illus. 23 cm. $4.50 1742

Contents Introduction. Section I, Standardizing fixture design: Designing jigs and fixtures. Advantages of tool-design standards. Details of fixture design. Welded, cast-iron, and light metal fixtures. Section II, Details in fixture design. Locating schemes for drill jigs and fixtures. Machine vises and vise jaws. Clamps and clamping methods. Section III, Accuracy in drilled holes: Drilling jigs and fixtures. Drill-jig bushings. Types of drill jigs and fixtures. Pneumatic fixtures for holding work. Section IV Methods for production milling: Milling fixtures. Grinding machine fixtures. Section . Handling large subassemblies. Welding and assembling fixtures. Section VI, Inspection and toolroom systems: Fixtures for inspecting work. System in the toolroom. Index.

Note (1189) In the manufacturing industries the efficient use of properly designed machine fixtures is an important factor in reducing the cost of producing an article. This volume, through the use of numerous practical illustrations, provides the tool design and construction and offers suggestions and data on reducing the costs of new fixtures. In this edition the material has been rearranged the wartime supplement of the fourth edition, dealing with welding and assembly fixtures, has been enlarged and incorporated as new chapter; and new data regarding drill jig bushings and fixtures for large assemblies have been added.

MORGAN, ALFRED POWELL

Tools and how to use them for woodworking and metal working written and illustrated with 600 drawings by Alfred P Morgan. New York Crown Publishers 1948 352 p illus 22 cm. $3.00 1743

Contents: Part I, Woodworking tools: The technique of using tools. Screws and screw drivers. How to use hand saw How to adjust and use planes. Drilling holes in wood. Wood chisels and how to use them. Laying-out and checking operations. Smoothing and finishing The right way to use glass cutter Sharpening woodworking tools. Directions for preparing and using glues Part II, Metal working tools: Drilling holes in metal and other materials Hand sawing metals. Files and filing The technique of soft soldering. Cutting threads with taps and dies. Wrenches. Punches and cold chisels How to use measuring tools in metal working. How to bend and rivet metal. Index.

Note Few of the available books on hand tools are as complete and satisfactory as this one. Frankly written for beginners and amateurs, it nevertheless describes and illustrates the uses of most of the hand tools that even the advanced home mechanic is likely to use. An exception is plumbing tools, such as pipe cutters and threaders, which for some unexplained reason are omitted. The illustrations are exceptionally good.

OWEN, HALSEY F

Introduction to tool engineering. New York Prentice-Hall, Inc. 1948 149 p illus. 24 cm. $3 60 1744

Contents Introduction to tool engineering Manufacturing methods and equipment. Methods and parts analyses Operation sheets and bills of material. Designing for production. Manufacturing costs. Tooling programs and the economics of tooling Tool design. Interchangeable manufacture. Estimating tool costs Index.

Note A brief survey of the responsibilities and techniques of tool, or production engineers in American industry It deals with the selection of manufacturing methods and equipment, and with the planning of operation sequences in the production of specific articles. The necessity of taking into account in each case all relevant factors such as available equipment, financial considerations and quality requirements is emphasized. The operation of machine tools is not covered, but standard tools and special tools are both outlined from the viewpoint of the production engineer

THOMPSON TORGER G AND ROSS A PETERSON

Illustrated jig tooling dictionary New York The Macmillan Company 1947 349 p illus. 24 cm. $7.50 1745

Note The technique of visual education has been successfully applied to these definitions of basic terms, tools, parts, operations, and procedures associated with jig building and tool making, here presented pictorially with brief textual explanations. In many instances the tool or unit is shown both in operation and unassembled. There is no instruction in techniques; nevertheless the student and inexperienced toolmaker should find this book an extremely useful source of information. The appendices contain many convenient tables including cutting speeds, thread dimensions, tap drill sizes, typical heat treatments for SAE steels, stresses and deflection of beams, and information on keys and bushings.

TURNER, WILLIAM PAYSON, AND HALSEY F OWEN

Machine-tool work fundamental principles. Second edition. New York McGraw Hill Book Company Inc., 1945 364 p. illus. 23 cm. $3.50 1746

Contents General shop instruction. Safety in the shop. Machine-shop materials. Cutting speeds and feeds. Measurement and measuring devices. The lathe. Lathe-tool shapes. Lathe operation—straight turning. Lathe operation—taper turning Boring and facing. Kinds of fits and fitting. Screws and screw threads. Lathe operation—screw cutting. The shaper The planer The milling machine. Milling-machine equipment. Gears and gear cutting. Turret lathes and their operation. Automatic and semiautomatic lathes Drilling and drilling machines. The grinding machine and grinding methods. Broaching and broaching machines. Problems in machine-tool work. Appendix. Selected list of motion pictures. Index.

Note. (1441) This textbook is based on material used in courses at Purdue University Its primary purpose is to present an introductory survey of machine-shop tools and processes for engineering college students. When used in the classroom it is intended to be supplemented with motion pictures and laboratory work. Nevertheless, it is also an excellent book for individuals who wish compact, profusely illustrated introduction to the subject for self-instruction. It has been extensively rewritten and revised from the first edition (1932)

WALKER, JAMES AND CARL C TAYLOR

Simplified punch and diemaking. New York The Macmillan Company 1946 235 p illus 22 cm. $5 00 1747

Contents Introduction. Plain round blanking dies. Typical blanking die. Heavy-duty dies. Sectional blanking dies. Compound blank and pierce dies. Kirksite blanking dies. Progressive dies. Piercing and trimming dies. Bending and forming dies. Drawing dies A manufacturing problem and its solution. Machine supplement. Summary Appendices. Index.

Note Dies for cutting sheet metal and dies for changing the shape of sheet metal by bending, forming, and drawing are covered in this book. Besides the descriptions of various die constructions and uses, the reader is told about die layout and design, die supplies and materials, and the machine tools, including the Keller machine, which are used in die making. Many well-chosen photographs, showing all phases of diemaking, are included. The work is intended for both experienced and beginning machinists, tool and diemakers, sheet-metal workers, and product designers. The authors are respectively Tool and Die Engineer J. Y Taylor Company and Assistant Shop Superintendent, Worcester Pressed Steel Company

WOODCOCK FREDERIC LINCOLN

Design of metal cutting tools. New York McGraw Hill Book Company Inc., 1948 406 p illus. 24 cm. $5.00 1748

Contents Part I, Fundamentals of design Economics and standardization. Elements of cutting. Maintenance, inspection, and sharpening. Cutting-tool materials. Heat treatments. Cutting fluids. Part II, Details of design Broaches Counterbores and countersinks. Cutters Drills. Form tools. Hobs. Miscellaneous tools Punches and dies. Reamers. Shaper tools. Single points. Threaded tools Appendix. Index.

Note Many years of experience in tool design are evident in this new manual. The expected descriptions of types and uses of tools are here, but there are in addition many bits of practical information that are invaluable but usually must be learned by experience. Throughout the work, the need for keeping economy in mind when designing or specifying tools is stressed, and there is much information on the conversion of tools when they have become too worn for the original operations. The appendix contains variety of useful reference data. The author is Chief Tool Engineer of the Hamilton Standard Propellers Division of the United Aircraft Corporation.

MACHINE SHOP PRACTICE

BEGEMAN MYRON LOUIS

Manufacturing processes. Second edition. New York John Wiley & Sons, Inc., 1947 626 p illus 22 cm. $5 00 1749

Contents: Foundry practice. Pattern work. Metal casting. Special casting methods. Plastic molding. Heat treatment of steel. Powder metallurgy. Welding and allied processes. Hot forming of metals. Cold forming of metals. Inspection-measuring instruments and gages. Lathes and lathe tools. Threads and thread cutting. Shapers and planers. Drilling and boring machines. Milling machines and cutters. Gears and gear-cutting machines. Metal sawing. Broaching machines and tools. Turret and automatic lathes. Abrasives, grinding wheels, and grinding machines.

Note: (1406) The primary purpose of this book is to acquaint engineering students with machines and methods used in several important manufacturing processes. Revisions in the second edition include rewriting of the plastic molding chapter and part of the one on welding, enlargement of the material dealing with casting methods and with hot and cold metal-forming, and addition of the chapter on powder metallurgy

BOSTON ORLAN WILLIAM

A bibliography on cutting of metals 1864–1943 New York American Society of Mechanical Engineers 1945 547 p. $6.50 1750

Note: An annotated bibliography of the literature of metal cutting. Citations include the author title, name of periodical, volume, date and pagination and are followed in each instance by short note which describes the scope of the article. The work incorporates two earlier bibliographies of the same author: *A bibliography on the cutting of metals,* New York: American Society of Mechanical Engineers, 1930, and *A bibliography on the cutting of metals. Part II,* Ann Arbor: Edwards Brothers, Inc., 1935 and lists several thousand new entries in addition. The main arrangement is chronological but there are good author and subject indexes.

COLVIN, FRED HERBERT AND FRANK A. STANLEY

American machinists handbook and dictionary of shop terms a reference book of machine-shop and drawing room data, methods and definitions. Eighth edition, revised and enlarged New York McGraw Hill Book Company Inc., 1945 1546 p illus 17 cm. $7 00 1751

Contents. Screw threads. Pipe and pipe threads. Drilling. Reamers and reaming. Taps and tapping. Files and work benches. Babbitting, brazing, soldering, and welding. Gearing. Turning and boring. Milling machine speeds and feeds. Grinding, lapping, and lapping. Screw-machine tools, speeds, and feeds. Punch press tools. Broaches and broaching. Bolts, nuts, and screws. Measuring and fitting. Tapers and dovetails. Shop and drawing-room standards. Wire gages and stock weights. Horse power belts, and shafting. Metals and other materials. Machine forgings. Knots and slings. General reference tables. Automotive data. Railroad shop data. Shop trigonometry. Dictionary of shop terms. Index.

Note: (1414) A standard reference book of methods, definitions and data for apprentices, machinists, draftsmen and designers. This edition has not been reset but has been revised by the addition of one hundred and sixty-six pages of new material which are inserted throughout several of the sections. The new text includes data on truncated Whitworth threads, wire measurements of tapered pipe threads, standards for involute splines, improved cutting tools, and calculations for bevel and other gearing. Besides the interpolated pages, this edition includes the *Wartime data supplement to the American machinists' handbook* that was issued separately in 1944. The index has been considerably expanded.

COLVIN FRED HERBERT AND FRANK A. STANLEY

Drilling and surfacing practice drilling, reaming, tapping, planing, shaping, slotting milling and broaching Third edition. New York McGraw Hill Book Company Inc. 1948 523 p illus 23 cm. $5.00 1752

Contents (abridged) Section I, Drilling: Drills and drilling machines. General drilling information. Deep-hole drilling. Section II, Reaming and tapping: Design, construction, and use of reamers. Taps and screw threads. Section III, Planers and shapers: Planers, shapers, and slotters. Planer tools. Shapers. The slotting machine. Section IV Milling: Primary milling operations. Types of milling machines. Universal indexing centers. Milling-machine attachments. Section VI, Broaching: General information about broaches. Commercial broaching. Index.

Note: (1415) A practical instruction and reference book for apprentice machinists. The construction, uses, care, and operation of the various machine tools are described, and useful data regarding sizes, speed, and power required for drills and cutters are included. In this edition most chapters have been expanded to cover new machines and practices, particularly those dealing with milling cutters, deep-hole drilling, taps and screw threads, and commercial broaching. The data contained in the wartime supplement of the previous edition have now been incorporated into the appropriate chapters.

COLVIN, FRED HERBERT AND FRANK A. STANLEY

Running a machine shop. Second edition. New York McGraw Hill Book Company Inc., 1948 521 p illus. 21 cm. $5.50 1753

Contents: Modern machine-shop practice. Planning shop. Shop equipment. Shop transport and materials handling. Toolrooms and tool cribs. Work in the shop. Estimating. Apprenticeship and training. Management. Foremen and personnel relations. Inspection systems. Postwar supplement. Index.

Note (1420) A well-known, standard work on the organization and management of machine shops. The new material in this edition is all in the 67-page section entitled "Postwar supplement Here many subjects are touched upon, but the emphasis is on job evaluation and time and motion studies.

COLVIN FRED HERBERT AND FRANK A. STANLEY

Standard and emergency shop methods. New York McGraw Hill Book Company Inc. 1945 333 p illus 22 cm. $3.50. 1754

Contents: Standard machine tools. Standard methods and machines. Making holes. Boring machines and boring mills. Lathe work. Milling practice. Planing, slotting, shaping, and machine forging. Grinding operations. Index.

Note A concise manual addressed to engineers and other factory personnel who require general knowledge of machining processes. It covers the standard machine shop operations and describes the machines used for them. Also it describes novel and emergency techniques devised for the most part during World War II when the supply of machine tools was restricted. The object of the latter features is to illustrate the wide range of machining operations that can be performed with limited equipment.

COLVIN FRED HERBERT

Starting a small machine shop New York McGraw Hill Book Company Inc. 1948 212 p. illus. 19 cm. $3.00 1755

Contents: Starting small shop. Selecting machinery and tools. Small shop layout. Shop furniture. Drills and drilling. Filing and sawing. Engine-lathe work. Milling-machine work. Cutting speeds. Water-hardening tool steel. Specialization. Overhead. Index.

Note: Colvin and Stanley's *Running machine shop* (see above) has proved useful to variety of persons including shop managers, proprietors, and machinists, thinking of going into business for themselves. This new book deals with the very small shop such one as might be set up to handle the repair of household appliances, or to specialize in specific kind of light operations. It is addressed particularly to veterans and contains good deal of common sense on the economic aspects of shop ownership.

Colvin, Fred Herbert, and Frank A. Stanley

Turning and boring practice. Third edition. New York McGraw Hill Book Company Inc., 1948 531 p illus. 24 cm. $4 75 1756

Contents: Section I, Lathes (in general) Modern machine-shop practice. The lathe. Chucks and chucking. Tapers—turning and boring in the lathe. Thread cutting. Fundamentals of accuracy with V block, mandrel, arbor, and surface plate. Examples of modern lathes. Section II, Turret and semi-automatic lathes: The turret lathe. Other modern turret lathes. Semi-automatic lathes. Section III, Automatic screw machines: Automatic screw-machine work. Setting up and operating automatic screw machines. Brown and Sharpe automatic screw machines. Multiple-spindle automatic screw machines. Collets, chucks, and tools. Screw-machine taps and dies. Miscellaneous tools and methods. Section IV Boring machines: Boring machines. Section , Cutting tools for different materials: Single-point tools. Sintered-carbide tools. Speed and machineability. Suggestions for machining various metals. Machining nonmetallic materials. Functions of cutting oils. Index.

Note: (1422) A practical guide for machinists, apprentices, shop executives, and others interested in the operation of machines used in turning and boring of metals. Discussions of essential principles and of major problems involved in the different operations are followed by descriptions of the more important types of machines and methods of operation. Useful data regarding speeds and feeds, cutting alloys and materials, and use of coolants are included. In this revision the material contained in the "Wartime supplement" of the previous edition has been incorporated into the text proper; and new data have been added on mandrel and taper work on lathes, precision boring, and carbide tools.

Edwards William Herbert

Precision shop mathematics. Boston D C. Heath and Company 1947 314 p illus. 23 cm. $2 60 1757

Contents Precision shop arithmetic. Mathematics of the shop formula. Precision shop geometry Precision shop trigonometry The mathematics of shop tapers. Machine operation formulas Screw threads. Standard gear dimensions. Index.

Note A sound, practical introduction to the accurate methods of computing which are required in present-day machine-shop work. The mathematics is directly related to the practical use of such instruments as gage blocks, micrometer calipers, snap gages, toolmakers' buttons, and machine tools found in modern shops. The book is intended for trade school students and for beginning machinists.

Harkins, Lothair Bernard

Magnesium fabrication. New York Pitman Publishing Corporation 1947 149 p. illus. 24 cm (Pitman books on industrial materials and processes, Alexander Klemin advisory editor) $3 00. 1758

Contents: History and future of magnesium. Available forms. Methods of joining. Layout. Cutting and trimming. Metal removal and finishing. Drilling. Riveting. Countersinking. Dimpling. Production forming. Hand forming Joggling. Heat treatment. Machining. Cycle welding. Gas welding. Arc welding. Spot welding Soldering. Corrosion resistance. Pickling. Painting. Contact protection. Inspection. Salvage. Scrap. Fire control. Standard parts. Industrial applications. Industrial contacts. Suggested tool list. Technical data. References. Index.

Note A brief guide for vocational students and metal workers. It can be used best by persons experienced in the fabrication of other light metals. In most cases the illustrative examples refer to the making of airplane parts, but other industrial applications are discussed. Data on the properties of magnesium alloys in comparison to other competing structural materials are tabulated at the end of the volume.

Hinman, Chauncey Weed

Practical designs for drilling, milling and tapping tools an illustrated reference book for designing, drafting and using modern types of drilling milling, and tapping tools Second edition. New York McGraw Hill Book Company, Inc., 1946 416 p illus. 23 cm. $4.50 1759

Contents: Drafting and designing. Fundamental types of drill jigs. Typical drill jigs and accessories. Work clamps and supports for drilling or milling. Centralization and equalization of work. Locking work with cams and keys. Commercial jigs and fixtures. Special vise jaws for milling. Clamps and supports for milling. Milling fixtures. Fixtures and methods for tapping. Twist drills and milling cutters. Special and standard machine operations. Shop mathematics. Speeds, feeds, lubricants, and coolants. Tool engineering tables. Correlated list of visual aids. Index.

Note: A useful book for practical tool designers and also for operators of machine tools. The second edition is greatly improved over the first edition (1938) The amount of textual material has been more than doubled and many new illustrations have been added. A number of the photographs show details of recently developed American tools.

Johnson Jack

Precision measurement, methods and formulas. New York Pitman Publishing Corporation 1948 181 p illus. 24 cm. $3.00 1760

Contents (abridged) Checking taper Measuring the angle between splines. Checking the angles of tapered recess. Checking the interior angle of profile gage. Measuring the angle of V groove. Checking the relief clearance of die. Measuring the angle of corner Finding the radius of circle segment. Finding the radius of concave surface. Checking the amount of arc in circular groove. Measuring the degrees of dwell on cam lobe. Accurate layout method for index plates. Measuring the diameter of recessed hole. Checking the width of small concave surface. Checking an internal dovetail. Checking the width of V groove with one wall perpendicular Determining the best size of wire for checking threads. Helix-angle correction on three-wire measuring.

Note: Fifty-seven relatively difficult inspection operations, such as are listed above, are considered in this book; and the equipment and procedure for carrying out each one are explicitly described. In each case methods that require only standard instruments and simple accessories, such as balls, pins and discs, are shown. The measurements made with these simple tools must in most cases be supplemented by mathematical calculation. T aid in these calculations the elements of trigonometry and square roots are reviewed in preliminary chapters.

Kaberlein, Joseph J

Short cuts for round layouts a textbook and working guide with practical and modern methods for laying out and forming patterns for round and oblong fittings, T's, elbows, and hoods mathematical formulas applied to sheet-metal work. Milwaukee, Wis. The Bruce Publishing Company, 1947 269 p illus 24 cm. $3 75 1761

—— Triangulation short-cut layouts a textbook and working guide with practical and modern methods for laying out and forming patterns used for blower-exhaust systems, heating and air conditioning mathematical formulas applied to sheet metal work. Milwaukee, Wis The Bruce Publishing Company 1948 290 p. illus 26 cm. $5.00. 1762

Note These titles, together with the author's *Air conditioning metal layout* Milwaukee: Bruce Publishing Company 1941 208 p. $1.75, constitute set that is designed for the practical instruction of students in vocational schools and beginners in the sheet-metal trades. Each book consists mainly of series of plates that illustrate rapid, geometric methods of laying out typical sheet-metal constructions. Each plate is accompanied by one or more paragraphs of step-by-step instructions.

SILVIUS, GEORGE HAROLD, AND GERALD B BAYSINGER

Safe work practice in sheet metal work. Edited by Earl L. Bedell. Chicago Ill. American Technical Society 1948 70 p. illus. 21 cm. Paper $0 75 1763

Contents: Preventing accidents in the shop. Good personal habits that prevent accidents. Safety in the shop. Safe use of the sheet metal hand tools. Safe use of equipment and machine tools for the sheet metal shop. Safety tests The student safety engineer Appendices. Selected bibliography Index.

Note. A concise explanation of safety practices which should be followed in metal working shops. The manual is intended for use in vocational schools, and is designed to supplement the usual texts and other forms of shop instruction. Numerous photographs are used to illustrate the right and wrong way of carrying out various operations.

SLADE, SAMUEL, AND LOUIS MARGOLIS

Mathematics for technical and vocational schools. Third edition. New York John Wiley & Sons Inc., 1946 532 p. illus. 20 cm. $2 76 1764

Contents: Common fractions. Decimal fractions. Percentage. Ratio and proportion. Mensuration. Practical computation. Logarithms. The slide rule. Miscellaneous problems for review Graphs. Measuring instruments. Practical algebra. Geometrical constructions. The essentials of trigonometry Strength of materials. Work and power. Woodwork. Tapers. Speed ratios of pulleys and gears. Screw threads. Cutting speed and feed. Gears. Milling machine work. Belting. Index.

Note. This textbook, intended for self-instruction as well as for class use in vocational high schools, covers the essentials of arithmetic, algebra, geometry and trigonometry as needed in the drafting room and shop. Sixty-five pages of useful mathematical tables are included. The third edition retains the same scheme of organization as the two previous editions, but some of the text has been rewritten, particularly the sections on machine shop practice, and many new problems have been added.

SPENCER, HENRY CECIL, AND HIRAM E GRANT

The blueprint language of the machine industries. New York The Macmillan Company 1947 255 p illus. 29 cm. $5.00 1765

Contents: Industrial prints Views of objects. Normal surfaces and edges. Inclined and oblique surfaces and edges. Cylindrical surfaces and edges. Sectional views. Auxiliary views Screw threads and fasteners. Dimensioning. Shop processes. Reading micrometer caliper and height gage. First-angle drawings. Right-hand and left-hand drawings. Welding representation. Gears. Commercial blueprints. Appendix. Index.

Note: The primary purpose of this book is to provide basic training in blueprint reading for industrial operators of machine tools. The volume is distinctly practical one, containing maximum of illustration and minimum of text, with emphasis on development of the student's ability to visualize objects in three dimensions. The book is in convenient loose-leaf form and is suitable for both self-instruction and class-instruction purposes. Review problems are attached to each chapter.

WOLFE JOHN H. AND EVERETT R. PHELPS

Practical shop mathematics Volume I—Elementary Third edition. New York McGraw Hill Book Company Inc., 1948 371 p. 20 cm. $2 40 1766

Contents: Common fractions. Checking multiplication and division by the excess of nines. Decimals. Micrometers, verniers, and bevel protractors. Algebra. The slide rule. Geometry. Trigonometry Tables of trigonometric functions. Greek alphabet. Answers to problems. Index.

Note: (1409) A course in the mathematics that concern such craftsmen as tool makers, die makers, draftsmen, etc. The first edition was based on material developed for use at the Ford Motor Company's Apprentice School, and the book is adapted to use in similar vocational courses, in high schools and in self-instruction. The major changes in this edition are an expanded treatment of trigonometry and the addition of the chapter on the slide rule.

METAL FINISHING

DAESEN, JOHN R

Galvanizing handbook. New York Reinhold Publishing Corporation 1946 166 p. illus 26 cm. $5.25 1767

Contents: Mechanism of protective action. Typical structure of zinc coating. Variations in the iron or steel base. Fluidity control with temperature. Fluidity control with aluminum addition. "Spangled" coatings with eutectic additions. Changes in coating after dipping. Heat treatment of the coating. Cleaning and pickling. Fluxing. The kettle and its by-products. Hot dip coatings with other metals. Appendices: Testing zinc coatings. Preparation of sections for photomicrography Density and strength of acid solutions. A.S.T.M. standard specifications for slab zinc (spelter) B6–37 A.S.T.M. standard specifications for zinc-coated steel and iron articles. Bibliography: Hot tinning. Index.

Note: So dependable is the hot-dip galvanizing process that much galvanizing is still done by rule-of-thumb methods that are not based on an understanding of the process. However more satisfactory coatings can be obtained—sometimes at lower cost—if the factors that influence the thickness, uniformity and other qualities of the zinc coating are understood. This book presents these factors and discusses good operating methods. The text is brief and concise, but it is supplemented by over 75 illustrations, most of which are reproductions of photographs and photomicrographs that illustrate defects and their causes. The author is consulting metallurgical engineer.

SIMONDS, HERBERT RUMSEY AND ADOLPH BREGMAN

Finishing metal products. Second edition. New York McGraw Hill Book Company Inc., 1946 352 p illus. 21 cm. $4.00 1768

Contents (abridged) Commercial aspects of finish and appearance. Preparation for the finish of metal products. Polishing and buffing. Plating and spray coating. Organic coating. Special finishes. Index.

Note. (1858) This book is designed primarily for manufacturers and designers of industrial products. It points out the sales value of good finishes, and then reviews finishes and finishing methods from practical viewpoint. The usual types of finishing are considered, including sprayed metal coating, enameling, lacquering, and the dyeing of aluminum. In this revision the entire subject as treated in the first edition (1935) has been brought up to date, and two new chapters added on metal coloring, and electroplating costs and estimating. Of special interest also are the new pages devoted to plating on plastics, special metal coating processes, and electrolytic polishing.

WAMPLER ROLLIN H.

Modern organic finishes their application to industrial products. Brooklyn, N Y Chemical Publishing Co Inc., 1946 452 p. illus. 22 cm. $8.50 1769

Contents (abridged) Section I, Modern organic finishing materials. Oleoresinous and alkyd varnishes and enamels. Cellulose lacquers, spirit varnishes, high-integrity and specialty finishes. Stains, wood and metal fillers, and miscellaneous finishing materials. Section II, Modern application methods: Spray painting. Dipping and flowcoating. Roller and knife coating. Tumble and centrifugal finishing. Section III, Drying methods: Air drying. Force drying. Baking by convection and radiant heat; high-frequency baking. Section IV Product handling in the finishing department. Conveying methods. Section Finishing processes: Wood furniture and cabinet finishing. Special industrial wood finishing problems. Finishing paper cardboard, and fabrics Finishing plastics and resin-impregnated wood. Finishing automotive and railway equipment. Finishing sheet steel products. Finishing iron castings. Rubbing and polishing organic finishes. Section VI, General considerations: Testing and evaluating finishes. Bibliography Index.

Note: A rather brief treatment of materials and methods that have found fairly wide practical application in industry It serves well as general manual for the information of manufacturers who need an introduction to the organic finishes, but it contains little that is

of interest to specialists. The bibliography lists books and gives the titles of current periodicals of interest, but does not include references to periodical articles.

YOUNG CLARENCE BERNARD FEHRLER
Chemistry for electroplaters. Brooklyn, N Y Chemical Publishing Co Inc., 1945 205 p illus 22 cm. $4 00 1770

Contents: Chemistry and chemical change element, compound and mixture; oxygen. Hydrogen, definition; three states of matter Carbon dioxide carbon monoxide elements of the atmosphere; theory of the atom and molecule symbols of the elements; valence; chemical equations. Chemical computations; chlorine, hydrogen chloride and sodium chloride. Acids, bases and salts; inverse proportions, the gas laws sulfur and its compounds; problems involving temperature and pressure of gases. True solutions; suspensions; emulsions; colloidal solutions and atomic weights. The compounds of nitrogen; ions; electrons and ionization. Ionic reactions; compounds of sodium and potassium. The halogen family· the periodic law; the structure of the atom. The phosphorus and alkaline earth groups; aluminum and silicon. Iron, cobalt and nickel zinc, cadmium and mercury· tin and lead. Copper silver gold, platinum, rhodium, tungsten, chromium, molybdenum and vanadium. Index.

Note Written for the practicing electroplater, this textbook outlines in simple style the fundamentals of chemistry which are necessary for an understanding of the electrolytic process. The author' personal experience with industrial electroplating problems and also with modern teaching methods has made the presentation readily understandable one. Review questions are given at the end of each chapter

FOUNDRY WORK

AMERICAN FOUNDRYMEN S ASSOCIATION
Foundry dust control symposium. Chicago American Foundrymen s Association, 1947 24 p illus 29 cm. Paper $2 00 1771

Contents: Hoods and piping for foundry dust control systems, by E. A. Carsey Centrifugal dust collectors, by H. C. Dohrmann. Cloth type dust collectors, by O. A. Bowser Wet type dust collectors, by A. S. Lundy Fans and exhausters, by P Cohen. Maintenance of foundry dust control equipment, by K. M. Smith.

Note A series of papers for foundry operators and technicians, published to promote better foundry practice. Most of them were presented at the fiftieth annual meeting of the American Foundrymen's Association held in Cleveland, May 6, 1946.

AMERICAN FOUNDRYMEN S ASSOCIATION
Handbook of cupola operation. Chicago American Foundrymen s Association, 1946 470 p. illus. 24 cm. $10.00 1772

Content The metallurgy of iron—a historical summary Operation of the cupola. The common cupola. Tuyeres. Special cupolas. The refractory lining. Mechanical charging equipment. Blowing equipment Blast control equipment. Equipment for measuring the temperature of molten iron. Gas analyzers Forehearths and receiving ladles. Cupola slag disposal Blast conditioning Pig iron. Classification of scrap for cupola mixtures. Alloying elements Foundry coke. Cupola slags, fluxes, and fluxing. Alkali desulphurizers and desulphurizing. Melting non-ferrous metals in the cupola. Fundamental thermochemical principles applicable to cupola operation. Combustion control in the cupola by analysis of the effluent gases. The constitution of cast iron. Appendix Applications of cast iron. Appendix Classified list of references on cupola practice. Appendix III Bibliography on cupola practice Index.

Note The American foundry industry has given its full support to the preparation of this manual The work is based on studies of current practice and on surveys of the related literature made under the direction of A F A committees. There are 183 photo-reprints, drawings, and diagrams of cupolas and auxiliary equipment, and 33 tables of metallurgical and other data. In addition to chapter reference lists, the bibliography at the end of the book contains nearly 500 citations to the literature of the subject.

AMERICAN FOUNDRYMEN S ASSOCIATION
Malleable foundry sand and core practice symposia. Publication No. 46–150 Chicago American Foundrymen s Association, 1946. 57 p illus 29 cm Paper $3.25 1773

Contents: Malleable foundry sand (1945 symposium) Malleable sand control—summary of questionnaire. A sand control program in malleable foundry by D F Sawtelle. A sand control program in mechanized malleable foundry by D F Sawtelle. Sand control in malleable iron foundry by G. Davis. Malleable sand control in large mechanized foundry by J J. Clark. Malleable foundry core practice (1946 symposium) Malleable foundry coremaking practice, by D F Sawtelle. Core practice in an agricultural malleable foundry by E. Welander. Malleable foundry core sand practice, by J J Clark. Cores for automotive malleable iron castings, by W G. Ferrell. Malleable core making practice, by E. C. Zirzow

Note A collection of papers for foundry managers and technicians.

AMERICAN FOUNDRYMEN S ASSOCIATION ANALYSIS OF CASTING DEFECTS COMMITTEE
Analysis of casting defects Chicago American Foundrymen s Association 1947 133 p. illus. 23 cm. $4.25 1774

Contents: Outline of causes of gray iron casting defects. Blows—gas holes, porosity pin holes and blisters. Scars, seams and plates. Shot iron or cold shots. Shrinkage cavities and depressions. Hot tears and cracks. Mass hardness. Hard spots—hard areas and chilled spots. Warped castings. Open grain structure. Misruns and cold shuts. Inclusions—dirt, slag and other material. Cuts and washes. Erosion scabs. Expansion scabs—buckles, rattails, blacking scabs and pulldowns. Crushes, push-ups and clamp-offs. Drops. Stickers or rats. Rough surfaces. Metal penetration. Fusion. Swells, fins, strains and sags. Shifts Core raise. Runoff or runaway Cores—wrong cores, improperly set cores and omission of cores. Runouts and bleeders. Broken castings. Inverse chill. Poured short. Kish. Defective test specimens. Index.

Note In this book each one of the casting defects listed in the contents above is illustrated in one or more photographs. Accompanying each photograph, or set of photographs, is tabulation of the causes of the particular defect. The book is intended for founders, and its purpose is to aid in reducing the number of defective castings produced.

AMERICAN FOUNDRYMEN'S ASSOCIATION COMMITTEE ON SAND CASTINGS ALUMINUM AND MAGNESIUM DIVISION
Recommended practices for sand casting aluminum and magnesium alloys. Chicago American Foundrymen s Association 1948. 55 p illus 23 cm. Paper $1 75 1775

Contents Aluminum-base casting alloys, Introduction General considerations—molding, melting and pouring, finishing, heat treatment, defects, their causes and prevention. Non-heat treated aluminum-copper alloys—chemical control limits, physical properties, conforming specifications, development, fields of use. Heat-treated aluminum-copper alloys. Non-heat-treated aluminum-silicon alloys. Heat-treated aluminum silicon alloys. Heat-treated aluminum-silicon-copper alloys Non-heat-treated aluminum-magnesium alloys. Heat-treated aluminum-magnesium alloys. Aluminum-zinc-magnesium alloy Magnesium-base casting alloys, Introduction General considerations—molding, melting and pouring, cleaning—shake-out and core knock-out—blasting—sawing—grinding—rotary filing—pickle treatment. Heat treatment. Impregnation. Welding. Defects—their causes and prevention. Field of use.

Note A useful volume of practical information describing the most recent advances in equipment and techniques in this field. Nine photographs illustrating gating arrangements for castings are included, and there are twenty-six tables of pertinent physical and chemical data. The work is directed at metallurgists and workers in non-ferrous foundries.

BENEDICT, OTIS
Manual of foundry and pattern shop practice. New York McGraw Hill Book Company Inc. 1947 361 p. illus. 19 cm. $3.25 1776

Contents: Foundry practice. Molding practice. Molding tools and equipment. Molding operations. Cores and coremaking. The cupola. Pouring molds and cleaning castings. Technological control. Structure of cast iron. Testing cast iron. Nonferrous. Patternmaking. Pattern allowances. Pattern materials. Cores, core prints, and core boxes. Construction methods. Band saws, circular saws, and machine knives. Characteristics of wood. Seasoning lumber. Glues. Plywood and veneers. Metal patterns. Problems for pattern design and pattern construction. Appendix. Bibliography. List of visual aids. Index.

Note: This introductory text is outstanding for its detailed descriptions of tools, materials, and methods. Tools, down to the most commonplace, are not only described but illustrated. The discussion of materials includes not only principal materials, but minor ones as well, such as the adhesives used in making laminated wood for use in pattern making. Processes such as preparing a mold for simple casting are described step-by-step. There is also some material on foundry recordkeeping.

CADY, EDWIN LAIRD

Precision investment castings. New York Reinhold Publishing Corporation 1948 356 p. illus. 24 cm. $6.00 1777

Contents: Description and history. Products cast in large quantities. Products cast in medium quantities. Products cast in small quantities. Economics of design. Comparison of precision investment casting with other processes. Metals and alloys. Dimensions, accuracies and contours. Surfaces. The master patterns. Molds. Dispensable pattern materials. Clustering. Investing. Casting. Index.

Note: Castings have been made by the precision investment or lost wax process for many thousands of years, but only in recent years has the method been refined and adapted to the mass production of small parts. This volume provides a description of techniques, from selecting the material for making the dispensable patterns to pouring the castings. The book will be useful not only to the technician but also to the industrial engineer seeking new production methods, for the author discusses the possibilities and limitations of the process and indicates where it can be applied most profitably.

MCCASLIN, HERBERT JOHN

Wood patternmaking a textbook. New York McGraw Hill Book Company Inc. 1946 Fourth edition. 366 p. illus. 19 cm. $2.60 1778

Contents (abridged): Machines and tools. Part I, Bench work. Pattern woods. The plane. A sand mold. Pattern features. Machine finish. Pattern regulation. Dowel pins. Core box for the clamp pattern. Core box for the gable pattern. The plugging of core prints. Core frame for the pedestal pattern. Core box for the support pattern. Core box for the tool-rest slide pattern. Core frame for the bracket pattern. Part II, Lathe work. Face-plate turning. Mounting the material for turning parted patterns. The checking and the inspection of patterns. Glossary of patternmaking and molding terms. Visual aids. Index.

Note: (1461) Designed for students in practical courses, this textbook in its enlarged and modernized fourth edition contains directions for making 64 typical patterns. There are many new illustrations, and the glossary contains additional terms.

SIMPSON BRUCE L.

Development of the metal castings industry Chicago American Foundrymen's Association, 1948 246 p illus. 27 cm. $8.50 1779

Contents: Prehistoric development of metal. Far Eastern foundry development. Casting development in the Mediterranean basin. Molding and molding methods of the Renaissance. Casting of bells and guns. Early castings of direct blast-furnace iron. The early iron foundry. Colonial foundries in the New World. Metals and melting in the nineteenth century. Development of foundry mechanization. Bibliography. Index.

Note: A lavishly illustrated history of founding. It begins with the earliest records and carries the story to about the beginning of the present century, although a few later innovations such as the introduction of the high-frequency induction furnace are included. The text is essentially an outline, but some care has been taken to give the origin and dates of important developments and inventions. The pictures show both founding processes and products of founding and are of general interest.

SOCIETY OF AUTOMOTIVE ENGINEERS, INC SPECIAL PUBLICATIONS DEPARTMENT

Foundry process control procedures (ferrous), a compilation of reports made by the SAE War Engineering Board at the request of the United States Army Ordnance Department covering steel castings malleable iron castings, gray iron castings and castings repair recommendations for steel, malleable iron and gray iron. New York Society of Automotive Engineers 1946 145 p. illus. 28 cm. Paper $3.00 1780

Contents: Section One, Steel castings: Purpose and general recommendations. General foundry procedure. Detailed foundry procedure. Ford Motor Co. steel foundry processes and specifications. Bibliography of steel castings. Section Two, Process control procedure of malleable castings. Purpose and general recommendation. Detailed foundry procedure—the most common pitfalls and how to avoid them. Bibliography. Appendices. Process control covering cupola operation in connection with duplexing method. Cupola—air furnace for malleable iron. Air furnace procedure. Section Three, Foundry process control procedure of gray iron castings: Purpose and general recommendations. Detailed foundry procedure—the most common pitfalls and how to avoid them. Appendices. Process control covering cupola operation—Instructions for charging cupolas. Starting of the blast. Cupola operation. Section Four. Castings repair recommendations: Repair of steel castings—recommendations for suggested shop procedure for the use of the U. S. Army Ordnance Department and industry. Repair of malleable iron castings. Repair of automotive gray iron castings.

Note: The need for large quantities of ferrous castings of high quality in the war effort led the Ordnance Department to request the S A E War Engineering Board to make a study of the problems encountered in the manufacture of iron and steel castings. This volume is a result of that study. It outlines methods that have proved successful in foundries, points out difficulties that may be encountered when a foundry attempts an unfamiliar type of casting, and makes detailed recommendations for satisfactory procedure. Methods followed in the steel foundry of the Ford Motor Company are described in some detail. The section on repair of castings treats a subject on which there has been little published literature. There are charts, diagrams, and other illustrative matter.

SOCIETY OF AUTOMOTIVE ENGINEERS, INC. WAR ENGINEERING BOARD

Process control of aluminum foundry procedure. New York Society of Automotive Engineers Inc., 1945 Unpaged. illus 28 cm. (Society of Automotive Engineers Inc. Progress report no 1) Paper $2.00 1781

Contents: Introduction. Baking of cores. Binders for core sands. Binders for molding sands. Cores. Core sands. Core washes and sprays. Definitions of foundry sand terms. Facing material. Inhibitors for cores. Inhibitors for molds. Molding sands. Molding compounds. Pastes and setting material. Reclaiming of core sand. Reprocessing of molding sands. Skin drying and smoking of molds. Spraying of molds. Summary of foundry problems. Testing of core sand. Testing of molding sand.

Note: This manual was prepared for the guidance of the many foundries, both new and old, which entered into the aluminum casting business during World War II. Based on a survey of well-established aluminum foundries, it outlines those methods and practices employed in the manufacture of aluminum castings which have proved most satisfactory and which can thus be accepted as standard procedure. A bibliography on centrifugal casting is included.

WELDING

GREEN, ROBERT S., AND OTHERS editors

Design for welding. Editor Robert S. Green, associate editors, Douglas C. Williams and Charles B Smith. Cleveland The James F Lincoln Arc Welding Foundation 1948.

1042 p illus. 22 cm. U.S., $2 00 foreign countries, $2.50 1782

Contents (abridged) The James F Lincoln Arc Welding Foundation—creation, objectives and activities. Section I, Aircraft: Arc welded assembly of the B-34 engine mount, by E. C. Constantine. Section II, Automotive: Design of an all welded bus body by H. C. Woods. Casting vs weld fabrication, by N. E. Wheeler. Section III, Railroad Improvements in welding of Diesel electric locomotives, by R. H. Macy Low-alloy welded box cars, by Max Reel. Section IV Watercraft 67 ft. 0 in. commercial fishing dragger by E. Monham, Jr Section Containers: Arc welded vacuum drying ovens, by C. H. J. Cooley Containers for the transportation of liquid chemicals, by A. F Meyer. Section VI, Furniture Teletex cabinet, by Victor Weidner Section VII, Structures: A five span all welded viaduct, by J F Willis. A welded ore handling bridge, by R. E. Mommsen. Arc welded steel column assemblies for wood frame and stucco houses, by A. Ban. Section VIII, Machinery: A new type concrete mixer by J P Woods. Automatic forming, boring and drilling machine, by E. M. Barrett. Design and manufacture of welded centrifugal pump by V E. Meyers. Fabricated gears, by R. F Fay Arc welded steam platens, by H. O. Lehmann. An arc welded mining machine, by E. Schmierer. Section IX, Welderies. Index.

Note: Design and production engineers will find this useful volume in that it provides descriptions of welding methods and techniques as they have been applied in actual engineering structures and products. Each chapter prepared by professional engineer and complete in itself shows how special problem was solved by welding methods. The liberal quotation of cost figures offers means of comparing different methods of manufacture.

Jefferson Theodore Brewster

The oxy acetylene welder's handbook, a complete and practical manual of modern practice. Fourth edition. New York Mc Graw Hill Book Co Inc. 1948 258 p illus. 17 cm. $2.50 1783

Contents: The welding flame. Welding equipment. Setting up equipment. Methods of welding. Preparation for welding. Inspecting the weld. Training operators Welding properties of common metals. Testing welds. Important applications. Oxy-acetylene cutting Index.

Note. A pocket-sized manual covering welding procedures with the oxy-acetylene flame. Photographs of good and bad welds are reproduced, and there are drawings and diagrams indicating methods of laying out work and making various types of welds. The book is adaptable both as text for beginners and as review or reference for the experienced welder and shop superintendent. Revision in this edition incorporates the latest accepted practices.

Rigsby, Herbert Prentice

Welding fundamentals. New York Pitman Publishing Corporation, 1948 178 p. illus. 24 cm. $2 75 1784

Contents: Welding fundamentals: History of welding—its place in industry Safe practices in welding. Arc welding equipment. Oxy-acetylene welding equipment. Electrical-resistance welding equipment. Heliarc welding equipment. Atomic-hydrogen arc welding equipment. Welding gases. Welding rods and fluxes. Types of joints. Standard welding symbols. Metallography Weldability of metals. Testing of welds. Design for welding. Glossary of welding terms. Exercises in welding practice Practice lessons. Appendices: Table of melting points. Iron-carbon equilibrium diagram. Bibliography Index.

Note. The information presented in this work is intended for engineering students and engineers rather than for students who wish to make welding their vocation. Accordingly the instructions are general and theoretical, and aim to show how arc welding may best be used on engineering projects. Such topics as where arc welding may be most profitably used what is the most easily welded steel, main functions of electrode coating materials; and the kinds of metals which are welded by the heliarc process are discussed. The chapter on tests is fairly complete and deals with the guide-bend, free-bend, nick-break, tension, radiograph, and other tests for welds.

The Welding encyclopedia, completely revised and re-edited by T B Jefferson. Originally compiled and edited by L B Mackenzie Twelfth edition New York The Welding Engineer Publishing Co 1947 1024 p illus. (part col d) 22 cm. $6 50 1785

Content An encyclopedia of welding. Appendices. A dictionary of trade names. The welding industry buyers' manual. Index

Note. (1695) A standard reference work mainly devoted to descriptions and discussions of welding equipment, materials, and techniques. In its original and revised forms the work has been in use by welders, engineers and students since 1921 For this edition the text material has been brought up to date and also cross-indexed more thoroughly than before. In addition, the information on metallurgy metals, and welding processes has been considerably expanded. The appendices tabulate useful data such as classes of welding electrodes, AWS-ASTM electrode specifications, gas consumption, etc.

ELECTRICAL ENGINEERING

GENERAL

Cook, Arthur Leroy, and Clifford C. Carr

Elements of electrical engineering a text book of principles and practice. Fifth edition. New York John Wiley & Sons, Inc. 1947 662 p. illus. 23 cm $5.00 1786

Contents (abridged) Part I, Electric and magnetic circuits: Fundamental electrical relations. Induced electromotive force. Rheostats and resistors. Fundamental relations of electric circuits. Part II, D-C machinery: Parts of D-C machine. Commutation. Armature reaction. D-C generator characteristics. D-C motor characteristics. Commutating poles and compensating windings. Special types of D-C generators. Batteries. Systems of D-C transmission and distribution. Part III, Alternating currents: Alternating currents and voltages. Mathematical representation of vectors. A-C circuits. Part IV A-C machinery Transformers. Polyphase induction motors. A-C generators. Synchronous motors. Single-phase motors. A-C transmission and distribution. A-C switching and protective devices. A-C motor-starting and protective devices. Part Instruments, electronics, special applications: Electric measuring instruments. Conduction in vacuum and in low-pressure gases. Electron tubes. Electric-control systems. Appendix—Tables. Index.

Note: (3708) This work is thoroughly established as text-book for use in short and not-too-rigorous courses, such as are offered to students who are not planning to specialize in electrical engineering. It is suitable for use also as self-instruction text. It has undergone extensive rewriting and revision for this edition but the scope and manner of presentation of the earlier editions have been retained.

Creamer, Walter Joseph

Elements of electrical engineering. New York McGraw Hill Book Company Inc., 1948 344 p. illus. 24 cm. $4.00 1787

Contents: Fundamental electrical quantities. Basic laws of the electric circuit. Conductors and insulators. Meters and measuring networks. Electrochemical principles. Transmission. The electric field. The magnetic field. The magnetic circuit. Inductance. Electrodynamic principles. Electronics. Appendix Index.

Note: An introductory text for students who intend to pursue further study of electrical engineering. It assumes satisfactory background in college physics, adequate training in algebra, especially the exponential forms, and some knowledge of calculus. The book goes beyond the scope of previous texts by including few new topics and stressing the nonlinear circuit elements, the concept of potential gradient in the electric field, and properties of materials used in electrical engineering. The author is head of the Department of Electrical Engineering of the University of Maine.

Dawes Chester Laurens

A course in electrical engineering. Volume II, Alternating currents. Fourth edition. New York. McGraw Hill Book Company Inc., 1947 708 p illus. 23 cm. $5.00 1788

Contents: Alternating current and voltage Alternating-current circuits. Complex quantities. Alternating-current instruments and measurements. Polyphase systems. The alternator Alternator regulation and operation. The transformer The induction motor. Single-phase motors. The synchronous motor The synchronous converter Transmission of power by alternating current. Electron tubes. Rectifiers. Appendices. Questions and problems. Index.

Note: (3710) Although designed as an elementary textbook for use in vocational schools and colleges, this work provides fuller treatment of principles than is common in texts of this class. Expansion of the treatment of fundamentals accounts for most of the revision in the present edition. Among new topics and those enlarged upon are properties of a-c circuits, instrument design which now includes discussion of the cathode-ray oscilloscope, operation of synchronous motors, alternator operation analysis, transformer core construction methods, vacuum tube emission theory and rectifier practice which now gives information on the ignitron and on the electronic control of motors. All of the problems and some of the illustrations are new The latest edition of volume is the third, published in 1937

Fitzgerald Arthur Eugene

Basic electrical engineering circuits, machines electronics. New York McGraw Hill Book Company Inc. 1945 443 p. illus. 23 cm. $4.25 1789

Contents (abridged) Electric-circuit analysis and circuit parameters. Alternating currents and voltages. Polyphase circuits. Transients. Magnetic circuits. Transformers. Qualitative concepts of machine performance. Polyphase induction motors. Polyphase synchronous machines. Direct-current machines. Physical aspects of high-vacuum tubes and their associated circuits. High-vacuum tubes as circuit elements. Gas tubes and phototubes. Instrumentation. Features of electrical control. Appendix. Index.

Note This textbook for engineering college students who are not specializing in electrical engineering is designed to give such students an understanding of fundamental electrical principles and an insight into the engineering and scientific applications of electronics, electrical measurements, and control. The space is about equally divided among the three main topics mentioned in the subtitle. Problems are included. The author is Associate Professor of Electrical Engineering at Massachusetts Institute of Technology

Gray Alexander

Principles and practice of electrical engineering revised by G A Wallace. Sixth edition. New York McGraw Hill Book Company Inc. 1947 568 p. illus. 23 cm. $5.00 1790

Contents (abridged) Matter and electricity Magnets and magnetism. Electromotive force. Electric circuits and resistance. Magnetic circuits and magnetic properties of iron. The meter-kilogram-second (mks) system of units. Mutual induction and self-induction. Armature windings for direct-current machinery Theory of commutation. Characteristics of direct-current generators. Characteristics of direct-current motors. Direct-current motor starters and controllers. Parallel operation of direct-current generators. Primary and storage batteries. Direct-current transmission and distribution. Alternating-current circuits. Alternating-current generators and polyphase circuits. Transformers. Polyphase induction motors. Polyphase synchronous motors and parallel operation of alternating-current generators. Single-phase motors. Converting and rectifying apparatus. Alternating-current transmission and distribution. Thermionic tubes and photoelectric cells. Laboratory course. Appendix. List of visual aids. Index.

Note: (3714) An elementary presentation of the basic principles and practices of electrical engineering, intended to serve as text-book for senior engineering students, not specializing in electrical engineering. The subject is developed by elaborating fundamental principles rather than by solution of mathematical equations. In this edition much of the scope and arrangement of the earlier edition has been retained; but the revised book now includes discussions of the amplidyne, ignitron, tetrodes, pentodes, push-pull amplifier

Company Inc., 1946 286 p illus. 24 cm. $5 75 1803

Contents. General principles. Methods of calculating inductances. Geometric mean distances. Construction of and method of using the collection of working formulas. Part I, Circuits whose elements are straight filaments: Parallel elements of equal length. Mutual inductance of unequal parallel filaments. Mutual inductance of filaments inclined at an angle to each other. Circuits composed of combinations of straight wires. Mutual inductance of equal, parallel, coaxial polygons of wire. Inductance of single-layer coils on rectangular winding forms. Part II, Coils and other circuits composed of circular elements: Mutual inductance of coaxial filaments. Mutual inductance of coaxial circular coils. Self-inductance of circular coils of rectangular cross section. Mutual inductance of solenoid and coaxial circular filament. Mutual inductance of coaxial single-layer coils. Single-layer coils on cylindrical winding forms. Special types of single-layer coil. Mutual inductance of circular elements with parallel axes. Mutual inductance of circular filaments whose axes are inclined to one another. Mutual inductance of solenoids with inclined axes, and solenoids and circular coils with inclined axes. Circuit elements of larger cross sections with parallel axes. Auxiliary tables of functions which appear frequently in inductance formulas. Formulas for the calculation of the magnetic force between coils. High frequency formulas. References.

Note. The purpose of this book is to simplify routine calculations of mutual and self-inductance problems. The author furnishes for each case of the more important types of circuit elements, single formula which includes numerical constants that may be interpolated from the book's special tables in which shape ratios are the arguments.

KRAEHENBUEHL JOHN OTTO, AND MAX A. FAUCETT

Circuits and machines in electrical engineering. Second edition. New York John Wiley & Sons, Inc. 1947 2 v illus. 24 cm. $4.25 each. 1804

Contents. Volume I, Circuits: Fundamental considerations in the field of electrical engineering. Electromotive force—cause. Resistance—energy-consuming counteraction. Inductance—reversible counteraction. Capacitance—reversible counteraction. The general circuit. Symbolic treatment of vectors—complex quantities. Circuit parameters in series. Circuit parameters in parallel. Solution of networks. Power and energy—single-phase alternating- and direct-current power. Polyphase circuits. Power in polyphase circuits. Power distribution. Electronics. Appendix. Index. Volume II, Machines: Machine construction and windings. The magnetic circuit. Magnetomotive force, leakage reactance, armature reaction. Transformers. The dynamo. Commutation. Alternating-current generators. Alternating-current motors. Direct-current generators. Direct-current motors. Efficiency and losses. Parallel operation of generators. Electrical applications and rates. Electrical illumination. Index.

Note. A distinguishing feature of this engineering college text book is that alternating and direct current principles and machines are not treated in separate parts of the course but are considered together under appropriate subtopics. The authors' original intention was to provide general but adequate exposition for engineering students not specializing in electrical engineering. However the book has had considerable use also in first courses offered to electrical engineering students. In contrast to the single volume format of the first edition the present edition is published in two volumes, and there is newly added material on transformers and on electronics. The number of problems has been increased, and the material on machines reorganized.

MASON WARREN PERRY

Electromechanical transducers and wave filters. Second edition New York D Van Nostrand Company Inc., 1948 419 p illus. 24 cm. (The Bell Telephone Laboratories series) $6.00 1805

Contents. Introduction. Electrical network theory. Applications of network theory to lumped mechanical systems. Acoustic systems and networks. Vibration of membranes and plates. Electromechanical converting systems. Design of electromechanical systems. Application of electromechanical impedance elements in electrical wave filters. Appendices. Index of subjects

Note. (1760) Many interesting analogies can be drawn between electrical and mechanical vibrating systems, since the motion in both satisfies the same type of differential equations. This book describes the principal analogies and interconnections between electrical theory and mechanical theory. Approximately eighty-two pages of new material are included in this edition, and all of it deals with applications of the methods previously described. The volume is intended for engineers, advanced students of engineering, and others who have the requisite training to understand the advanced mathematics in which the exposition is principally carried out.

REED, MYRIL BAIRD

Alternating-current circuit theory New York Harper & Brothers 1948 603 p. illus. 24 cm. (Harper's electric power series, J E. Hobson, chairman) $5.50 1806

Contents. Sine wave and vector representation of an alternating current. Algebra of complex numbers. The current, voltage, power, and energy relations in resistors, capacitors, and inductors (self and mutual induction). The general series circuit of constant circuit elements. The parallel and series-parallel electric circuit. Nonsine waves—Fourier series. Graphical methods of computation. Transients—alternating-current source voltages. The writing of circuit equations—cyclic or mesh currents and node voltages. Some electrical network theorems. Three-phase wye- and delta-connected power distribution systems. Power and energy measurements in power systems. Symmetrical components. Steady state operation of transmission line. Electric filters. Index.

Note. A thoroughly modern treatment for students in engineering colleges. Essentially there are two parts as follows: the first nine chapters in which are treated the more general, basic topics covered in most introductory courses in the subject and the remaining six chapters which deal with more specialized topics. Relatively little descriptive material is included and this appears mainly in the opening paragraphs of chapters. However there are numerous photographs of modern a-c machinery and instruments. As the table of contents indicates, the treatment is predominantly mathematical. Calculus is employed throughout, and matrix algebra is introduced in one of the later chapters The author is Professor of Electrical Engineering in the University of Illinois.

RICHARDSON, DONALD ELMER

Electrical network calculations tabular methods of solution. New York D Van Nostrand Company Inc. 1946 270 p illus. 23 cm. $5 75 1807

Contents. Kirchhoff' first law Kirchhoff's second law Tabular solution of algebraic equations. Tabular solution of electrical networks. The changes in the emfs of network, and mesh transfer conductances. Equivalent resistance of resistance combinations. Point to point voltage drops, currents, and resistances. Problems having K currents given. Changes in the resistance of single branch. Equivalent impedance of impedance combinations and equivalent a-c networks. Inductive coupling. Appendix A—The basis for tabular procedures. Appendix B—Laws and theorems pertaining to linear bilateral networks. Appendix C—Tabulations corresponding to junction-point current-equations. Appendix D—Bibliography

Note. The mathematical system outlined in this text was devised by the author to simplify and facilitate the solution of electrical network problems. It provides for the tabulation and arithmetical manipulation of *emf* and resistance values of electrical networks, instead of solutions by algebraic equations. The six initial chapters give general description of the methods to be followed, while the remainder of the volume deals with their application to specific problems. *Numerous illustrative examples* and problems are used to supplement the textual material.

SELGIN PAUL J

Electrical transmission in steady state. New York McGraw Hill Book Company Inc., 1946 427 p illus. 22 cm. (Radio communication series Beverly Dudley consulting editor) $5.50 1808

Contents. Introducing the four-terminal network as circuit element some general principles. The constants of networks and their significance. Network theory applied to uniform nonreflecting transmission lines. Distortion in transmission lines. Reflection at the terminals of transmission networks and lines. Use of mapping methods. Power flow through networks and lines. Behavior of electrically long lines having small dissipation. Problems involving impedance transformation. Use of lines as matching devices. Composite lines and stubs. A brief review of electromagnetic theory—static fields.

Maxwell's equations and their application to circuit elements. Exponential lines. Inductive coupling and transformers. Capacitive coupling. Four-pole theory applied to the vacuum tube. Flow of power through high-frequency amplifiers. Index.

Note. This textbook is designed for advanced engineering students and for men with practical experience in electrical engineering. It is essentially review and correlation not of elementary principles but of fundamental principles and methods useful to the engineer concerned with electric circuit, field, and network problems.

SKRODER, CARL ERIC, AND MARION STANLEY HELM

Circuit analysis by laboratory methods. New York Prentice-Hall, Inc., 1946 288 p illus. 23 cm. (Prentice-Hall electrical engineering series W L. Everitt editor) $5.35 1809

Contents: General laboratory instructions. The report. Circuit protection. Rheostats. Ammeters and voltmeters. Drop-of-potential methods for measuring d-c resistance. Current, resistance, and heat. Elementary study of the d-c shunt motor. Elementary study of the a-c generator Kirchhoff's laws. The electrodynamometer wattmeter Measurement of voltage current, and power Ohmic and effective resistance. Determination of impedance and its components. The series circuit. The parallel circuit. Mutual inductance. Polyphase circuits. Measurement of polyphase power. Measurement of reactive volt-amperes by means of wattmeters. Index.

Note: A guide and text for use in conjunction with laboratory course in electrical circuits. The authors planned the book for students who are taking theory course in d-c and a-c circuits concurrently with the laboratory course or who have already completed such course. The laboratory experiments are presented as problems of design, experiment, analysis, and synthesis, in the course of which the student must plan the preliminaries, carry through the experimental phase, analyze the data, and finally arrive at rational interpretation and explanation of the circuit performance.

WEINBACH MENDELL PENCO

Electric power transmission New York The Macmillan Company 1948 362 p illus. 24 cm. $5 50 1810

Contents: Circuit properties of transmission lines Transmission line formulas. Applications of the transmission formulas. Equivalent circuits of transmission lines. Lines with transformers. Voltage control of transmission systems. Steady state power limits. Faulted transmission systems. Transient stability System instability Appendices. Index.

Note A first text in the subject for electrical engineering students who have had the required preliminary education in mathematics and electrical theory It is based on courses given by the author at the University of Missouri. The problems of electric power transmission only are considered, and no attempt is made to describe such related matters as equipment, methods of installing transmission lines, etc. The approach is largely mathematical and each chapter illustrates methods of analyzing and solving particular type of transmission problem.

POWER SYSTEMS

CRARY SELDEN BRONSON

Power system stability New York John Wiley & Sons, Inc. 1945–47 2 v illus. 22 cm. (General Electric series) Vol. I $4.50 Vol. II, $6.00 1811

Contents: Volume I, Steady state stability: Power flow Synchronous machine power angle characteristics. Stability limits. Composite systems. Equivalent reactance of synchronous machines. Application of stability criterion C. Long distance power transmission. Stability characteristics of turbine generators. Transmission line electrical loadings. Straightaway transmission line comparative economic study System design. Special cases. Appendix Index Volume II, Transient stability Fundamental concepts for transient analysis. Synchronous machine torque angle characteristics. System torque angle characteristics. Two-machine stability Multi-machine problems. Generator characteristics—methods of analysis. Generator stability characteristics. High-speed reclosing circuit breakers. System design. Overall stability Appendix. Bibliography Index.

Note: The fundamental theory of electric generating and transmission systems, under both normal and abnormal operating conditions, is thoroughly discussed in this work for electrical engineers. The first volume deals with the influence of small or gradual changes on electrical states of equilibrium, and the second with the effects of large or sudden changes. An important feature of the work is its wealth of bibliographical material, which includes both chapter references and an extensive selective bibliography of literature published during the years 1894–1945. The author is associated with the Central Station Engineering Divisions of the General Electric Company

DEWEESE, FRED C

Transmission lines design, construction and performance. New York McGraw Hill Book Company Inc. 1945 297 p illus 22 cm. $4 00 1812

Contents. Transmission systems. Conductors and circuit comparisons. Electrical properties of conductors Short transmission lines. Medium-length and long transmission lines. Mechanical design of transmission lines. Mechanical calculations. Sag and tension calculations. New method of calculating sag in long spans (mean length method) Line location and survey Transmission-line devices, structures, and structure spotting. Construction of wood-pole transmission lines. Construction of steel-tower lines Performance of high-voltage transmission lines with phase control. Transmission of power at critical load. Mathematical operations and corona-loss calculations. Index.

Note This volume is aimed at engineers charged with the design of transmission lines and at construction men engaged in building them. It provides step-by-step procedure from simple short line to long high-voltage line problems. In the parts dealing with construction, much practical information is given, and many of the details and techniques are illustrated with photographs taken on actual jobs. In addition to the author's new "mean length method" for calculating the sag in long spans, new methods for finding the economical size of and copper-weld copper cables are given. A few completely worked problems are included for demonstration purposes.

KATES EDGAR JESSE

Diesel-electric plants a practical text on the characteristics, installation maintenance, and operation of Diesel-driven generators, including voltage regulators frequency and automatic controls Second edition. Chicago American Technical Society 1945 272 p illus. 22 cm. $3 75 1813

Contents: Characteristics of Diesel engines. Alternating-current and direct-current generators for Diesel drive Voltage regulation of direct-current generators. Voltage regulation of alternating-current generators. Parallel operation. Engine governors, including automatic control of frequency and load sharing. Self-operation of Diesel plants. Automatic controls and alarms for the Diesel engine. Electric starting of Diesel engines Starting and stopping generators and voltage regulators. Installation and maintenance of generators and voltage regulators. Diesel electric locomotives. Index.

Note: (1770a) An outline of the mechanism and operating characteristics of Diesel engines and electric generators, as used in conjunction with each other. This edition has been enlarged by more than ninety pages, with new material on rheostatic and electronic type regulators, automatic synchronizers, and engine governors. Intended for both vocational school students and operators of Diesel power plants, the material is mainly descriptive.

KIMBARK EDWARD WILSON

Power system stability Volume I. New York John Wiley & Sons, Inc. 1948 355 p. illus. 22 cm. $6 00 1814

Contents: Volume I, Elements of stability calculations: The stability problem. The swing equation and its solution. Solution of networks. The equal-area criterion for stability Further consideration of the two-machine system. Solution of faulted three-phase networks. Typical stability studies Index.

Note: The special qualities of this work are due—at least in part—to its origin as material for lectures delivered to graduate engineers. The problems and methods of calculating stability charac

teristics in advance and of correcting conditions of instability in transmission systems already constructed are discussed clearly and in detail from the practical viewpoint of graduate electrical engineers. Noteworthy topics in this volume, in addition to the subjects mentioned in the contents, are descriptions of the General Electric and Westinghouse alternating-current calculating boards, numerous examples of swing curves, and condensed analyses of the stability conditions of first-power systems. These last are based on actual studies made by operating and engineering companies.

SANFORD FRANK E

Electric distribution fundamentals Second edition. New York McGraw Hill Book Company Inc., 1947 252 p illus. 23 cm. $3.50 1815

Contents Perspective of the electric system. Distribution to serve the load. The distribution division. Generation of electricity. Fundamentals of the electric circuit. Inductance and related characteristics. Tools for electrical problems. Transformers. Transformer operation. Transformer connections. Voltage control. Current interrupting equipment. Voltage protection—lightning—grounding. Street lighting circuits. Mechanical principles in distribution. Economic principles in distribution. Measures of service. Appendix. Chart for graphical solutions. Index.

Note (3775) Foremen, linemen, repairmen and others who are engaged in practical work on electric distribution systems are the intended audience for this book. Accordingly the subject is simplified as much as possible by the use of analogies and graphical methods. Technical terms with which the practical workman will be familiar are used freely however. The chief changes included in this second edition are the addition of the chapter on transformer operation and an explanation of the trigonometric method of calculating vectors. The author was formerly Superintendent of Distribution Engineering for the Cincinnati Gas & Electric Company

TARBOUX JOSEPH GALLUCHAT

Electric power equipment. Third edition. New York McGraw Hill Book Company Inc. 1946 493 p illus 22 cm. $6 00 1816

Contents General introduction. Types of power plants. Load graphs and their significance. Generating equipment. Synchronous generator excitation. Electrical power-plant circuit layouts. Transformers. Transformer connections. Switchboards and switchboard layouts. Switching equipment. Switching and control devices. Meters and measurements. Short-circuit currents. Transmission-line calculation. Transmission-line installation. Protection of electrical systems. Transmission-line disturbances and protection. Substations. Distribution systems. Economics of electric service. Appendices. Typical power-plant designs. Reports and problems. Experiments. Index.

Note (3778) This work is designed primarily as textbook or reference book for students in electrical engineering who have already had fundamental course covering electrical circuits and machinery. Into the volume has been gathered the essential elements to enable the student to "obtain 'a bird's-eye view' of the entire field of electrical power equipment from the point of generation to the customers' meter center. In the third edition the text has been revised at frequent intervals in order to cover changes and developments in the power-equipment field since the publication of the second edition in 1932. In order not to increase the size of the book, some material has been deleted. In some instances the discussion has been expanded in the interest of clarity as for examples in the chapters on Generating equipment, Synchronous generator excitation, and Transformers.

ELECTRIC MACHINERY

BLALOCK, GROVER CLEVELAND

Direct-current machinery New York McGraw Hill Book Company Inc., 1947 367 p illus. 21 cm. $3 75 1817

Contents Electromagnetic induction The dynamo. Armature windings. Commutation, armature reaction Operation of generators. Generator characteristics. Direct-current motors. Motor control. Losses, efficiencies. Ratings, weights, and costs. Special types and applications. Testing and maintenance Batteries Visual aids Index.

Note. In recent years, according to the author of this textbook, the curricula of engineering schools have made better provisions for the study of direct-current electrical equipment, although sales of d-c machinery have risen proportionately higher than sales of a-c machinery This work is offered as an introductory text. The exposition is relatively simple and there is considerable emphasis on applications. Intended chiefly for junior students in engineering and technical schools, it should be useful, also, as review book or self instruction text. The discussion assumes that the reader will have had some groundwork in engineering mathematics and electrical theory

BRAYMER, DANIEL HARVEY, AND A. C. ROE

Repair-shop diagrams and connecting tables for lap-wound induction motors practical step-by-step information and instructions for connecting all types of windings for two-phase and three-phase motors of 2 to 24 poles Second edition. New York McGraw-Hill Book Company, Inc., 1946 387 p. illus. 23 cm. $3.50 1818

Contents (abridged) How to use the connecting diagrams. How to use the cell-grouping charts and tables. How to work out unequal cell groupings. Special diagrams for two- and four-speed motors. How to make stub connections. (Diagrams and tables of connections for motors of two to twenty-four poles, inclusive) Finding index. General index.

Note A standard book for vocational students, electrical maintenance men, and motor winders. This edition has been extensively revised, and large amount of new text and illustrative matter added. The emphasis of the book is now on the three-phase motor. Accordingly some of the more detailed material on the two-phase motor that appeared in the first edition (1921) has been deleted, but the basic data has been retained, and there is even some new matter on this type of motor

DRINKALL, LEON RAY AND OTHERS

Alternating current motors operation, connection and maintenance, by L R. Drinkall, Frank Hodik, and E. T Groat. Chicago American Technical Society 1948 367 p. illus. 22 cm. (American Technical Society electrical series) $3 00 1819

Contents: Types of alternating-current motors, by L. R. Drinkall. Types of alternating current generators, by L. R. Drinkall. Operating c. generators and motors, by J A. Spencer and E. T Groat. Universal motors, by H E. Stafford. Repulsion-induction motors, by H. E. Stafford. Polyphase induction motors, by H. E. Stafford. Synchronous motors, by H. E. Stafford. Alternating-current motor starters, by G. O. Wilms. Controls for alternating-current motors, by Frank Hodik. Use of resistors for controlling motors, by Frank Hodik. Index.

Note In this simplified, practical guide prepared for the use of motor operators and maintenance men, emphasis is placed on the general principles of operation and construction of c. motors, but specific types of motors are also described in detail. Trouble-shooting charts are included for simplifying the analysis and repair of breakdowns.

DUFFIN DANIEL JOHN

Generators and motors and their applications. New York McGraw Hill Book Company Inc. 1947 210 p illus. 26 cm. (Working manuals for motor repairmen) $4.00. 1819a

Contents Electrical fundamentals. Direct-current generators. Direct-current motors Alternating-current generators. Alternating current motors. Single-phase motors. Motor enclosures, bearings, and applications. Maintenance and trouble shooting. Appendix. Index.

Note: The outstanding virtue of this book is that it enables motor repairmen and armature winders to become familiar in relatively short period of time with wide variety of motors and generators—many more than might be encountered in decade of practical work. Well over four hundred illustrations (most of them reproductions of photographs) are included, and all have been selected to illustrate either (1) fundamental principles of motors and generators, (2) maintenance and repair operations, or (3) actual types used in industry The accompanying text is clearly written and free of all mathematics except arithmetic.

DUNLAP, CARL HARRY, AND OTHERS
Transformers, principles and applications by Carl H. Dunlap W A Siefert, and Frank E. Austin. Chicago American Technical Society 1948 277 p. illus 22 cm. (Electrical series) $2 75 1820

Contents Transformer construction, by W Esty F E. Austin, and C. H. Dunlap. Transformers, by W A. Siefert. Design of small transformers, by F E. Austin.

Note Discussions of basic electrical principles are used in this elementary text to introduce the opening topics which deal with transformer core, coil, and lead structures. Transformer theory connections, and operation are handled in the second part, while in the last section the reader is told how to calculate wire and core sizes and the number of turns that are necessary for building several types of transformers. The book is written in simple language easily understandable by the trade school students and practical electricians for whom it is intended.

DWIGHT HERBERT BRISTOL
Electrical coils and conductors their electrical characteristics and theory New York McGraw Hill Book Company Inc., 1945 351 p. illus. 22 cm. $5.50 1821

Contents (abridged) Reactance of concentric core-type transformers. Interleaved component of transformers. Cross section of transformer cores. Operation of delta and — transformer banks. Eddy-current loss. Connection of armature coils for balanced polyphase windings. Resistance to ground. Inverse functions of complex quantities. An exercise in graphical flux plotting with computed test for accuracy Ring calculations for transmission-line conductors. Reactance of stranded conductors. Reactance of round tubes. Reactance values for rectangular conductors Skin effect in concentric tubular conductors Proximity effect. Curves for skin effect and proximity effect. Mutual inductance of line wire circuits. An extension of Maxwell mutual-inductance formula to apply to thick solenoids. Self-inductance of circular coils without iron. Force between coaxial coils without iron. Some calculations for mechanical force between cylindrical transformer coils A preliminary calculation of magnetic force of current elements by Doppler effect. Repulsion between strap conductors. Longitudinal force in tapered conductor. Index.

Note: An invaluable work for advanced electrical engineering students and electrical engineers who are concerned with the design of transmission lines, transformers, and electrical machinery The treatment assumes that the reader will be familiar with most types of electrical machinery and with integral calculus. Many original formulas and graphs are included.

HEUMANN, GERHART W
Magnetic control of industrial motors. New York John Wiley & Sons Inc. 1947 588 p illus. 24 cm. (General Electric series) $7.50 1822

Contents: Introduction. Symbols and diagrams. Principles of direct-current motor operation. Principles of alternating-current motor operation. Direct-current contactors and relays. Alternating-current contactors and relays Accessories Pilot devices. Electronic devices. Resistors and rheostats Construction of control panels. Basic direct-current control circuits Basic alternating-current control circuits Amplidyne control circuits. Protection. Solenoids, thrustors, brakes. Manual controllers. General-purpose controllers. Direct-current intermittent-duty controllers Alternating-current intermittent-duty controllers. Maintenance of control equipment. Index.

Note: Electrical engineers and head electricians in industrial plants are often called upon to select or design controls for electric motors. This book is written primarily for such men rather than for engineers and inventors who are concerned with the design of new methods of control. A full treatment of electronic controls is not attempted in the single chapter on that subject.

JAMES HENRY DUVALL, AND LEWIS EDWIN MARKLE
Controllers for electric motors a treatise on the modern industrial controller with typical applications to the industries New York McGraw Hill Book Company Inc., 1945 324 p illus. 24 cm. $4.00 1823

Contents: Function and types of control. How to read controller diagrams. How to make controller diagrams. Magnetic contactors. Starting characteristics of motors with different methods of control. Methods of accelerating motors Methods of speed control. Control for special applications Mechanical and dynamic braking Regeneration. Voltage control for direct-current motors. Series-parallel control and the electropneumatic contactor. Adjustable-speed alternating-current motors of the wound-rotor type. Types of resistors Manual controllers. Direct-current magnetic-contactor controllers. Alternating-current controllers. Synchronous-motor control. Electric-tube control. Protective devices. National codes, installation and maintenance. Future control developments. References. Index.

Note. A short, inclusive treatment which is designed for men such as operating engineers who need generalized but practical knowledge of the types of controllers, their characteristics and uses. Parts of James' *Controllers for electric motors* New York D. Van Nostrand Company Inc., 1926, have been incorporated; but the greater part of the book is new. There are over 400 figures, many of which show details of modern controlling equipment.

KATES, EDGAR JESSE AND H. E. STAFFORD
Electric generators, operation and maintenance. Chicago American Technical Society 1948 268 p. illus. 22 cm. (American Technical Society electrical series) $2 75 1824

Contents: Types of alternating-current generators, by L. E. Dinkloff. Operating c generators and motors, by J A. Spencer and E. T Green. Voltage regulation of direct-current generators, by E. J. Kates. Voltage regulation of alternating-current generators, by E. J Kates. Parallel operation, by E. J Kates. Management of hydroelectric machinery by H. E. Stafford.

Note: A simplified, practical text and reference manual for power station operators, repairmen, and maintenance men. The chief purpose of the book is to provide information which will decrease breakdowns, save time in analyzing difficulties, and aid in making rapid repairs. The commonly occurring generator troubles are listed along with the probable causes and the remedies. Reader knowledge of the basic electrical principles is assumed.

KLOEFFLER, ROYCE GERALD AND OTHERS
Direct-current machinery by Royce G Kloeffler Russell M. Kerchner and Jesse L. Brenneman. Revised edition. New York The Macmillan Company 1948 395 p illus. 24 cm. $5 75 1825

Contents: The dynamo. Dynamo principles. The dynamo magnetization curve. Armature windings. Armature reaction. Reactance voltage and commutating poles. Dynamo voltage characteristics. Operation of generators. Motor speed and torque characteristics. Starting and speed control of motors. The three-wire distribution system. Efficiency of dynamos. Testing of dynamos. Special direct-current machines and applications. Rating, weight, and cost of dynamos. Commutation. Units and fundamental concepts. Index.

Note: (1702) A standard text for use in undergraduate engineering courses. Emphasis is placed on the practical rather than the theoretical aspects of the subject, but there is also adequate discussion of theory. A fair amount of new material has been added in this edition. This includes discussions of such topics as the amplidyne, multiple-field exciters, airplane generators, and recent information on interface films between brushes and commutators. The book has been re-set and the format considerably improved.

LIWSCHITZ-GARIK MICHAEL
Electric machinery Assisted by Clyde C. Whipple. New York D Van Nostrand Company Inc., 1946 2 v illus 23 cm. Vol. I, $4 00 Vol. II $6.50 1826

Contents (abridged) Volume I Fundamentals and d machines: Fundamental laws. Application of the circuital law of the magnetic field to the electric machine. D-c armature and field windings. Emf and Mmf of d-c armature. The d-c machine. Losses and heating. Starting of d-c motors. Volume II, A-c machines: Application of Faraday's law to the generation of polyphase Emfs. The transformer. A-c windings. The Mmf and field of an a-c winding. The

polyphase induction motor. The synchronous machine. The rotary converter. Starting a-c motors and motor protection. Appendices: Fractional-slot lap windings. Harmonics and parasitic torques in polyphase induction motors. The exact-circle diagram of the polyphase induction motor. Capacitor motor. Pulling into step of synchronous motors. Transient and subtransient reactances. Design principles of an electric machine—specific tangential force. Harmonic analysis.

Note A textbook for undergraduate courses in electrical engineering. The author has discussed fundamental electrodynamic principles and then has demonstrated their applications to a-c and d-c motors and to transformers. A good deal of information is presented in the two volumes, and some of it should be of interest to the graduate engineer. The book is based on the author's three-volume work published originally in German between 1926 and 1934 but the material has been extensively revised to bring it up to date and adapt it for American use.

McCullough William Wallace

Electric motor maintenance. New York John Wiley & Sons Inc., 1947 126 p illus. 22 cm. $2 00 1827

Contents: Good maintenance and what it means. Mechanical maintenance: The mechanical assembly of the motor. Sleeve bearings and lubrication. Ball and roller bearings. Kingsbury thrust bearings. Current-collecting devices. The air gap. Electrical maintenance: Insulation—materials. Insulation—cleaning and drying. Insulation testing. Operation and application. The induction motor. The direct current motor. The synchronous motor. The gear motor. Motor generator sets. Electric couplings. Index.

Note A short, practical discussion of the maintenance rather than the repair of motors. It will be useful to mechanics, factory inspectors, and other persons who are charged primarily in keeping industrial motors in good running order rather than with the repair of them after breakdowns.

McDougal, Wynne Luther and others

Direct current motors and generators principles operation and maintenance, by Wynne L. McDougal F E. Keith, and Richard R. Ranson. Chicago American Technical Society 1947 332 p. illus. 22 cm. (American Technical Society electrical series) $3.00 1828

Contents Induced currents, by W. L. McDougal. Principles of generator, by D. P. Moreton. Armature construction, by D. P. Moreton. Types of direct-current generators, by L. R. Driskell. Types of direct-current motors, by L. R. Driskell. Installing generators and motors, by J. A. Spencer and E. T. Grant. Testing of rotating electrical machinery, by F. E. Keith. Locating and correcting troubles of d-c. motors and generators, by F. E. Keith. Direct-current motor starters, by R. R. Ranson. Direct-current motor controllers, by G. J. Kirkpatrick. Index.

Note One of series of books issued by this publisher for the instruction of practical workmen. In this book the theory construction, operation, testing, and maintenance of direct current machinery are discussed. Trouble-shooting and routine maintenance operations are well covered but repair-shop operations, such as the rewinding of motor coils, are not treated.

McFarland Thomas Clair

Alternating current machines New York D Van Nostrand Co. Inc 1948 540 p illus. 24 cm. $6.00 1829

Contents The single-phase transformer. Special-purpose transformers. Polyphase transformations. Polyphase induction machines. The synchronous machine. The constants of synchronous machines. Performance of synchronous machines. Mechanical-type power converters. Electronic-type power converters. Single phase motors. Alternating-current motor controls. Index.

Note A college text based on material developed for courses given to junior and senior electrical engineering students at the University of California. The detailed discussions of special characteristics, design, construction, and operation of various types of a-c machinery require that the student have prior knowledge of a-c current theory. Numerous circuit diagrams are included but no attempt is made to describe specific commercial machines. The problems given at the end of each chapter illustrate the practical applications of the subject.

Paschkis Victor

Industrial electric furnaces and appliances. New York Interscience Publishers, Inc., 1945–1948 2 v illus. 23 cm. Vol. I, $6.00 Vol. II $8 00 1830

Contents (abridged) Volume I, Introductory survey. Economic justification. Uses. Selection of furnace types. Fundamentals of furnace calculations. Fundamentals of furnace economy. Electrode melting furnaces (arc type and arc resistor type). The furnace body. The electrodes. Busses (connectors). Transformer and reactor. Furnace control. Operating diagram and efficiency. Ferro-alloy furnaces. Appendix. Subject index. Volume II, Resistance furnaces and appliances. Section One, Indirect heat furnaces: Furnace size and heating time. Furnace parts. Furnace design. Section Two, Direct-heat furnaces. Section Three, Appliances—resistance type: Direct-heat appliances. Indirect-heat appliances (resistance type). Induction and high-frequency capacitance heating: High-frequency power supply. Induction furnaces and appliances. High-frequency capacitance (HFC) or dielectric heating. Selection of furnaces. Appendix. Subject index.

Note. Electric furnace construction and operation are here discussed chiefly from the standpoint of engineers who may be responsible for the design and operation of such furnaces. Although some descriptive matter is included and many of the illustrations show actual installation, the emphasis is not on description but on sound application of known principles of heat transfer. The author's purpose is to facilitate the design of furnaces that will operate more efficiently, particularly in the production of uniform products, than is possible when design is based only on past experience. Much engineering data are given in graphs and tables, and many useful mathematical formulas are included. There is considerable discussion of accessories such as electrodes, pots, and covers.

Rosenberg Robert

Electric motor repair a practical book on the winding, repair and troubleshooting of a-c and d-c motors and controllers. New York Murray Hill Books, Inc., 1946 2 v in 1 illus. 23 cm. $5.00 1831

Contents: Foreword, by L. David Cohen. Split-phase motors. Capacitor motors. Repulsion-type motors. Polyphase motors. Alternating-current motor control. Direct-current armature winding. Direct-current motors. Direct-current motor control. Universal, shaded pole, and fan motors. Direct-current generators; synchronous motors and generators, synchros electronic control of motors. Appendix. Index.

Note A clearly-written book for students who are learning electric motor repair in trade schools or on the job. The text takes up the various types of motors one by one, describes their operating principles and construction, then gives specific, practical directions for troubleshooting, repair and rewinding. The text and illustrations comprise two separate volumes, each of which is attached by spiral wire to the outer edges of common binding. When in use, the binding and both volumes may be placed flat on desk or work bench and the text and plates turned separately. When not in use, the two volumes are folded inward to form what appears to be single volume.

Sealey William C

Transformers theory and construction. Scranton Pa. International Textbook Company 1948 [246 p] illus. 22 cm. $3.00. 1832

Contents (abridged) Part Transformer uses. General characteristics of transformers. Construction of elementary transformer. Core-type power transformers. Shell-type power transformers. Surge voltage protection. Transformer cooling methods. Entrance bushings. Part Three-phase connections. Tap-changing equipment. Parallel operation. Phase transformation. Three-winding transformers. Autotransformers. Unit substations. Part III Rotary converter transformers. Rectifier transformers. Instrument transformers. Network transformers. Reactors. Transformer noise. Temperature equipment. Installation and maintenance of transformers. Insulating oil. Appendices. Index.

Note A concise introductory exposition that is suitable for use in vocational courses and for self-instruction. It discusses the fundamental principles of transformers, and outlines practical methods for calculating transformer performance. However theoretical considerations are reduced to minimum, and the emphasis is on the practical aspects of design, construction, and use. The author is Eng-

neer-in-Charge of transformer design at the Allis-Chalmers Manufacturing Company

STAFFORD HARRY E.

Troubles of electrical equipment their symptoms, causes and remedy Third edition. New York McGraw Hill Book Company Inc., 1947 455 p. illus. 23 cm. $4.50 1833

Contents: Induction-motor troubles and remedies. Synchronous-motor troubles and remedies. Maintenance of direct-current generators and motors with their troubles and remedies. The operation, maintenance, and troubles of transformers. The operation, application, maintenance, and troubles of autotransformers. Operation and proper methods of connecting instruments transformers. Troubles of air and oil-circuit breakers. Operation, maintenance, and troubles of relays. Industrial motor control. Points to remember in selecting motors for an industrial application. Operation, maintenance, and troubles of lightning arresters. Insulation-resistance tests. Factors determining the economic use of power. Power factor: what it is; what it does to an industrial-plant power-load, how to control it. Handling maintenance and inspection on schedule basis. The value of load survey and how to make one. The troubles of voltage regulators, their symptoms, causes, and remedies. Industrial plant lubrication. Determination and location of cable faults. Storage battery maintenance. Index.

Note: The practical nature of this trouble-shooter's manual has already established it as standard guide for plant electricians and other persons charged with locating and eliminating troubles in electrical equipment. Each chapter in addition to discussions of uses, operation, and maintenance methods, includes handy tabulation of symptoms, troubles, causes and remedies. In the present edition, the chapter on relays and the one on storage battery maintenance are new; the chapters dealing with transformers and voltage and current regulators have been considerably enlarged.

TARBOUX, JOSEPH GALLUCHAT

Alternating-current machinery Scranton Pa. International Textbook Company 1947 652 p illus. 23 cm. (International textbooks in electrical engineering) $7.50 1834

Contents (abridged) Part I, Fundamental-circuit theory Generalized circuit equations. Fundamentals of machinery Part II, Transformers: Determination of transformer equivalent circuits. Ideal power transformer Voltage regulation, efficiency and losses. Ideal coupled circuit. Transformer connections. Auto-transformers. Special types of transformers. Harmonics and leakage inductance. Part III, Induction machinery: Three-phase induction motor construction. Rotor magnetomotive force. Theoretical circle diagram of unsaturated three-phase induction motor Induction generator Single-phase induction motors. Split-phase induction motors. Series A-C commutator motors. Repulsion motors. Part IV, Synchronous machinery: Generator construction details. Generator induced voltages. Voltage regulation of alternators. Alternator impedances Alternator transients. Alternator losses. Synchronous motors. Parallel operation of alternators Mechanical transients of synchronous machines. Part Converters and rectifiers: Rotary converters. Electronic converters. Experiments. Index.

Note: Professor Tarboux's earlier textbooks are well known. This new work presents—for textbook—a thorough treatment of the basic circuits of alternating-current machinery including transformers, generators, motors, converters and rectifiers. It is intended for use in senior classes in engineering schools; hence adequate preparation in mathematics is assumed. The author is Professor of Electrical Engineering at Cornell University

VEINOTT CYRIL GEORGE

Fractional horsepower electric motors. What kinds are available—what makes them run and what they will do—How to repair rewind and reconnect them. Second edition. New York McGraw Hill Book Company Inc., 1948 554 p illus. 24 cm. $5 00 1835

Contents: The story behind the nameplate What makes an induction motor run? Single-phase induction motor windings and connections. Split-phase induction motors. Capacitor-start motors. Two-value capacitor motors. Permanent-split capacitor motors (single-value capacitor motors) Capacitor motors for unit heaters, shaft-mounted fans and blowers. Two-speed tapped-winding capacitor motors. Repulsion-start induction motors. Repulsion and repulsion induction motors. Universal motors. Shaded-pole induction motors and fans. Polyphase induction motors. Synchronous motors. Position-indicating and synchronous-drive systems. Direct-current motors. Constructional features common to more than one type. Testing fractional horsepower motors Selecting motor for the job. Appendix. Glossary List f visual aids. Index.

Note. (1808) A successful manual which has proved useful not only to motor-repairers but also to manufacturers and engineers concerned with the design and maintenance of machinery powered by small electric motors. This edition has been thoroughly revised and has been expanded by more than 100 pages. A considerable part of the material that has been carried over from the first edition has been rewritten. Synchronous motors and systems which found wide application during World War II are now covered. There are many new illustrations and glossary

ELECTRIC WIRING

ABBOTT, ARTHUR LAURIE

National electrical code handbook based on the 1947 edition of the National Electrical Code. Sixth edition. New York McGraw Hill Book Company, Inc., 1947 633 p illus. 19 cm. $4.00 1836

Contents (abridged) Introduction to the code. Part I, Definitions; general provisions. Part II, Approved types of wiring. Part III, Installation of materials and apparatus: Conductors. Installation requirements applying to all types of wiring. Open wiring on insulators. Cable assemblies. Raceways. Underplaster extensions. Outlet, switch, and junction boxes and fittings; cabinets and cutout boxes. Switches—panelboards—switchboards—auxiliary gutters. Lampholders—lighting fixtures—rosettes—receptacles. Electrical appliances. Motor wiring and protection. Generators—transformers—autotransformers. Capacitors—resistors and reactors—lightning arresters—storage batteries. Part IV General requirements for wiring installations Services. Grounding. Overcurrent protection. Design of wiring installations. Part , Special cases Outside wiring. Hazardous locations Garages, service stations, and bulk-storage plants. Theatres. Motion-picture studios. Elevators. Cranes and hoists. Machine tools, electric welders. Signs and outline lighting. Circuits and equipment operating at more than 600 volts between conductors. Circuits and equipment operating at less than 50 volts. Radio equipment Remote-control, signal, and low-energy power systems—communication systems. X-ray equipment. Part VI, Construction of materials, devices, fittings, and equipment. Tables. Cross index. Subject index.

Note. (3701) A standard work whose chief purpose is to make clear the compact and sometimes cryptic paragraphs of the National Electrical Code. Code provisions are explained, and the exposition is accompanied by practical directions and diagrams. Involved rules are restated in simple language The book is used chiefly by electrical contractors and working electricians. In this edition it has been revised to conform to the 1947 Code.

CROFT TERRELL

American electricians handbook, a reference book for practical electrical workers revised by Clifford C. Carr Sixth edition. New York McGraw Hill Book Company Inc., 1948 1773 p illus. 19 cm. $6.00 1837

Contents (abridged) Fundamentals. Properties and splicing of conductors. Circuits and circuit calculations. General electrical equipment and batteries. Transformers. Electron tubes and circuits. Generators and motors. Outside distribution. Interior wiring. Electric lighting. Wiring tables. Index.

Note: (3708) A standard handbook of fundamental and practical information pertaining to the selection, installation and operation of electrical apparatus and materials. It is designed particularly as reference book for electricians and electrical contractors, but it contains many data that are useful also to electrical engineers. Compared to the fifth edition, the present edition has been extensively revised and enlarged. Changes have been made throughout the book to make the text and data conform to the 1947 edition of the National Electrical Code. The section on electron tubes and circuits is new and there is additional material on such topics as electronic control of motors, rectifiers, plastic-insulated wires, and fluorescent lighting.

GOLDBERG BENJAMIN

Electricians pocket companion. New York Murray Hill Books, Inc., 1948 442 p illus. 19 cm. $2 50 1838

Contents: Index of wiring diagrams Index of electrical formula applications Index of tables. Electrical fundamentals. Terms commonly used. Electricians' tools. Methods of work. Electric motors. Transformers. D-c and a-c motors. Typical control schemes for -c starters. Lighting and signal circuits. Domestic heating system controls. Insulation resistance testing. Electrical equipment troubles. Residence wiring systems. Illumination values. Symbols and abbreviations. Electrical formulas and their applications. National Electrical Code tables, diagrams, and examples. Standards for electrical materials, equipment, and installations. Useful information. Safety precautions and emergency first-aid treatment. Index.

Note A reference handbook that is actually small enough to justify the adjective "pocket. It is designed for practical electricians, and it contains both standard reference data and "practical pointers. In order to keep the book small the author has omitted discussions of theory and data on the more advanced and unusual types of electrical work. However he has covered most of the electrical topics on which an electrician or an apprentice working on residential or small industrial installations is likely to need information.

NOWAK JOHN F

Practical residential wiring. New York D Van Nostrand Company Inc., 1948 495 p. illus 24 cm. $5 95 1839

Contents: Circuiting. Tools and splicing. Plan reading. Methods of wiring—open wiring on insulators, concealed knob and tube, nonmetallic cable. Methods of wiring—armored cable—rigid conduit—surface extensions. Household electrical appliances. How to wire bungalow How to wire one-family house—armored cable. How to wire workshop and garage—rigid conduit. Finished-house wiring. Lighting fixtures. Signaling systems Testing and trouble-shooting. Glossary National Electrical Code tables Index.

Note: The special feature of this manual is the very detailed discussions of wiring and maintenance operations Many jobs are described step by step The book is intended for practical students and workers, particularly vocational school students, apprentice electricians, home mechanics, and building superintendents

RICHTER HERBERT P

Practical electrical wiring residential, farm, and industrial based on the 1947 National Electrical Code. Third edition New York McGraw Hill Book Company Inc. 1947 575 p illus. 21 cm. $3 75 1840

Contents Part I, Theory and basic principles Underwriters and codes. Electricity—basic principles and measurements. Types of current power factor transformers Basic devices and circuits. Overcurrent devices. Types and sizes of wires Selection f proper wire sizes. Wire connections and joints. Theory of grounding Outlet and switch boxes Different wiring methods Branch circuits and service entrances. Adequacy Good lighting Residential and farm motors. Part II, Actual wiring residential and farm Planning an installation. Installation of service entrance and ground. Installation of specific outlets. Finishing—installation of switches and other devices. Miscellaneous wiring Old work Farm wiring. Isolated lighting plants. Part III, Actual wiring nonresidential projects Wiring apartment houses. 1947 Code requirements with respect to wire. Planning nonresidential installations. Miscellaneous problems in nonresidential wiring. Nonresidential lighting Wiring for motors. Wiring schools and churches. Wiring offices. Wiring stores Wiring miscellaneous occupancies. Appendix (Code tables) Bibliography Index.

Note (1812) The two previous editions have won recognition as an excellent, practical manual, useful primarily to the working electrician but intelligible, also, to the home mechanic who wants to learn how particular operation in wiring should be done This third edition has been extensively revised. Not only have the changes necessitated by the revisions published in 1947 of the National Electrical Code been made but other parts of the text have been revised or amplified The new material on fluorescent lamps found in Chapter 14 is typical of the added material. As before, the appendix contains tables quoted from the National Electrical Code; but it contains also, in this edition, examples of applications of Code requirements that were prepared for the 1947 Code but were omitted from it for lack of space.

RICHTER, HERBERT P

Practical electricity and house wiring a practical book of instruction covering in detail every branch of electrical work as applied to the wiring of small buildings. Based on 1947 National Electrical Code. Chicago Frederick J Drake & Co , 1948 246 p illus. 19 cm. $2 00 1841

Contents (abridged) Electricity and how it is measured. Underwriters; electrical codes. Dictionary of common devices. Wires and insulation. Polarizing and grounding. Fuses, circuit breakers and circuits. Wiring methods. Wiring with non-metallic sheathed cable. Wiring with armored cable. Wiring with conduit. Wiring houses after they are built. Wire sizes. Wiring farm buildings. Motor characteristics motor wiring. Principles of efficient lighting. Independent lighting plants Index.

Note (1812) A well-known elementary book intended for study by apprentices and students in vocational schools. It covers only the simpler types of wiring systems and devices, but it treats them clearly and adequately for persons who will be concerned only with simple jobs such as residential wiring. This edition has been rather extensively revised so as to make the text conform to the 1947 Code and to describe new wiring devices such as small circuit breakers and service entrance cable.

ELECTRONICS

ADVANCES IN ELECTRONICS, edited by L. Marton. Volume I. New York Academic Press, Inc., 1948 475 p illus. 24 cm. $9.00 1842

Contents Oxide coated cathodes, by A. S. Eisenstein. Secondary electron emission, by K. G. McKay Television pickup tubes and the problem of vision, by A. Rose. The deflection of beams of charged particles, by R. G. E. Hutter Modern mass spectroscopy by M. G. Inghram. Particle accelerators, by M. Stanley Livingston. Ionospheric research, by A. G. McNish. Cosmic radio noise, by J. W Herbstreit. Propagation in the FM broadcast band, by K. A. Norton. Electronic aids to navigation, by J. A. Pierce. Author index. Subject index

Note A collection of original articles, each one of which is essentially monograph of the topic mentioned in its title. In each case the existing knowledge and the pertinent literature are reviewed, and keyed references are given to the original literature sources. The volume is the first of projected annual series. The planned purpose of the series is to provide graduate engineers and other research workers in the field of electronics with convenient means of keeping abreast of important new developments and of finding the literature of special topics of current interest.

ALBERT ARTHUR LEMUEL

Fundamental electronics and vacuum tubes. Revised edition New York The Macmillan Company 1947 510 p illus. 24 cm. $6 00. 1843

Contents Basic electronic theory Emission of electrons. Thermionic cathodes. Two-electrode thermionic vacuum tubes. Three-electrode thermionic vacuum tubes. Multielectrode thermionic vacuum tubes. Rectifiers. Vacuum-tube voltage amplifiers. Vacuum-tube power amplifiers. Oscillators. Modulators. Demodulators. Photoelectric devices and circuits. Cathode-ray tubes and measuring devices. Index.

Note (1835a) Although this text is interesting primarily for undergraduate electrical engineering students, it constitutes survey of fundamental principles and practices which has proved useful as "brush-up" book for persons who have had some previous education in electronics. The material is well selected, and the exposition is outstanding for clarity The rather extensive list of references is also useful to the serious reader In this edition, there are newly added or considerably expanded sections on such topics as power amplifiers, klystron tubes, cavity resonators, magnetron tubes for ultrahigh frequencies, selenium rectifiers, and the use of reactance tubes in providing frequency-modulated waves.

ARGUIMBAU LAWRENCE BAKER

Vacuum-tube circuits. New York John Wiley & Sons, Inc. 1948 668 p illus 22 cm. $6.00 1844

Contents Radio communications. Diodes and rectifiers. Triodes, pentodes, and linear amplifiers (including random noise) Transient response of video amplifiers. Amplitude modulation and tuned amplifiers. Power amplifiers. Oscillators. Inverse feedback. Amplitude modulation. Frequency modulation. Pulses and television. Microwaves. Index.

Note. There is much in this work on present-day electronic circuits, but it is incidental to the book's main purpose the training of students in sound, analytical thinking, based on knowledge of fundamentals. The author makes point of the rapid evolution of electronic devices and the consequent rapid obsolescence of descriptive information. As the work is intended primarily for advanced students in engineering colleges, it is assumed that the reader will have some knowledge of the physical principles of vacuum tubes, alternating-current circuits, calculus and Fourier series. The work is well organized and written in concise, stimulating style. The author is member of the faculty of Massachusetts Institute of Technology

BATCHER, RALPH R., AND WILLIAM MOULIC

The electronic control handbook. New York Caldwell-Clements Inc., 1946 344 p. illus. 23 cm. $4.50. 1845

Contents: Section I, Basic elements of control Theory of control systems. Signal transmission systems. Section II, Conversion elements. Section III, Electronic modification circuits: Control amplifiers. Control oscillators. Counting and timing controls. Electrical conversion circuits. Passive networks. Deviation detection. Section IV, Activation elements: Synchros and servo-systems. Solenoids and relays. Saturable reactors. Section Control motors. Welding control. Speed control. Miscellaneous electronic applications. Selected bibliography Index.

Note: A compact treatment for engineers and others who have some knowledge of electrical principles. It reviews briefly the general principles of control systems; then explains the common circuits and circuit elements and states their characteristics and uses. Many illustrations and diagrams are included. The chapter references together with the bibliography direct the reader to sources of more precise information on specialized topics such as the design details of control equipment.

BENDZ, WALDEMAR I.

Electronics for industry with the assistance of C. A. Scarlott. New York John Wiley & Sons Inc., 1947 501 p. illus. 22 cm. $5 00 1846

Contents Meet the electron. Electron escape from solids—emission. Electricity from light. Electricity into light. Two-element tubes. Three-element phototubes. Multigrid phototubes. Thyratrons. From alternating to direct current. Mercury-pool tubes. Amplification. Principles of oscillation. Modulation and detection of carrier waves. Heating by high frequency Basic circuits of electronic control. Industrial applications of electronic control. Electronic regulators. Appendix. Index.

Note An introductory work written to provide engineers in fields other than electronics with basic knowledge of electronics so that the design and applications of industrial electronic equipment can be understood. The author has assumed that the reader will be acquainted with the principles of electricity and the characteristics of electric circuits A number of typical industrial devices are described in detail, but the book is more than descriptive treatment of such equipment The author is associated with the Westinghouse Electric Corporation.

CHUTE, GEORGE M

Electronics in industry New York McGraw Hill Book Company Inc., 1946 461 p. illus. 22 cm. $5.00 1847

Contents (abridged) Time-delay action. Tubes in a-c circuits. Kinds of high-vacuum tubes. Light and heat relays. Controlling large currents with tubes. Thyratron tubes. Resistance-welding controls. Gradual control by thyratrons by phase shifting. Heating and light-dimming controls. Tube control of d-c motor. Arc-welding control. Voltage and speed regulators. Large-current rectifiers. Inverters, oscillators and the electronic heater Temperature recorders. High-speed light relays. Register controls. Thy-mo-trol—automatic tube control of d-c motors. Electronic service instruments. Nonelectronic devices. Correlated list of visual aids. Index Answers.

Note. An elementary survey of electronic devices now in use in industry It is intended primarily for the practical worker without formal technical education, and its main purpose is to make the principles of industrial electronic apparatus clear to the persons who operate it. Principles, circuits, characteristics, and some of the applications are given for most of the devices treated.

COOKE, NELSON MAGOR, AND JOHN MARKUS

Electronics dictionary an illustrated glossary of over 6,000 terms used in radio television, industrial electronics, communications, facsimile sound recording, etc. New York McGraw Hill Book Company, Inc. 1945 433 p illus. 23 cm. $5.00 1848

Note: In this dictionary well-selected terms are defined in language that should not prove unintelligible to the reader who lacks engineering training. At the same time the accuracy of the definitions will appeal to engineering students and engineers. There is fair number of illustrations. The authors have considered the problem of abbreviations carefully and have presented the forms they believe are best and should be made standard. Unfortunately there are no cross-references to related terms. The first author is an executive officer of the Radio Materiel School of the Naval Research Laboratory the second is Associate Editor of *Electronics*.

ELECTRONICS

Electronics for engineers, reference articles, charts, and graphs from Electronics magazine. Edited by John Markus and Vin Zeluff New York McGraw Hill Book Company Inc., 1945 390 p illus. 29 cm. $6.00 1849

Contents: A-F impedance-matching networks. Antennas. Audio amplifiers. Audio-circuit design. Capacitors. Cathode-ray tubes. Coaxial lines. Electronic heating. Filters. Industrial control. Iron-core transformers and chokes. Mathematics. Networks Oscillators. Permanent magnets. Pulses. Rectifiers Relays. R F coils and transformers. R F impedance-matching networks. R-F power amplifiers. Sound. Television, frequency modulation, and facsimile. Transmission lines. Tubes. Tuned circuits. Wide-band amplifiers.

Note: One hundred and forty-two articles that have reference value have been collected in this volume. In some cases they have been revised or condensed to suit them to the book. However the date of the original appearance of each item in *Electronics* is given. The compilation is valuable reference book for all persons concerned with the design of electronics apparatus.

HARRISON ARTHUR EDWARD

Klystron tubes. New York McGraw Hill Book Company Inc., 1947 271 p. illus. 23 cm. $3 50 1850

Contents: Klystron construction. Cavity resonators. Electron-bunching theory Klystron amplifiers. Klystron frequency multipliers. Reflection bunching. Reflex oscillators. Two-resonator oscillators. Multiple-resonator tubes. Modulation of klystrons. Klystron tuners. Klystron operation. Klystron power supplies. Microwave measurement techniques. Appendixes. Index.

Note: Instead of achieving anode currents of desired characteristics by the control of filament emission, the klystron tube maintains steady flow from the cathode but then frequency-modulates the velocity of escaping electrons, thus bunching them to produce periodic plate current. Radio frequencies above 1,000 megacycles are made available by this tube. Specialists in ultra high frequency radio will be familiar with the *Klystron technical manual* which was written by the author of the present volume and published by the Sperry Gyroscope Company in 1943 and again in 1944. This new title includes material that was in the earlier publication, but the

contents have been revised and so much expanded that there is little resemblance other than subject between the two books. The work now furnishes a comprehensive exposition of the theory and operating characteristics of klystron tubes.

HARVARD UNIVERSITY CRUFT LABORATORY

Electronic circuits and tubes by the Electronics Training Staff of the Cruft Laboratory Harvard University New York McGraw Hill Book Company Inc. 1947 948 p illus. 23 cm. $7.50 1851

Contents: Alternating current theory. Circuit response. Circuit elements. Measurement of circuit elements. Networks and impedance matching. Transients. Coupled circuits. Filters. Fourier analysis. Electron emission and the diode. Multielement tubes. Cathode-ray tubes. Amplifiers—class A and class B. Power tubes. Oscillators. Gas-filled tubes. Rectifiers and power supplies. Signal analysis. Principles of modulation. Methods of modulation. Detection. Test instruments. Radio receivers. Timing circuits. Appendices. Subject index.

HARVARD UNIVERSITY CRUFT LABORATORY

Transmission lines, antennas, and wave guides by Ronold W P King Harry Rowe Mimno and Alexander H. Wing. New York McGraw Hill Book Company Inc. 1945 347 p. illus. 23 cm. $3 50 1852

Contents: Transmission lines, by Alexander H. Wing. Antennas, by Ronold W P King. Ultra-high-frequency circuits, by Ronold W P King. Wave propagation, by Harry Rowe Mimno. Problems. Index.

Note: The origin of these volumes was a set of lectures before classes of U S. Army and Navy technical officers during World War II. The course was preparatory to the study of radar. The treatment is elementary in the sense that it is intended for persons who are just beginning to study electronics, particularly high frequency phenomena, but the authors have assumed that their audience will know mathematics through calculus and will have had at least one college course in physics. The text of the first volume is unexpectedly comprehensive for an elementary work. The second volume omits material that was not released for publication sometime after the end of the War, but is otherwise a satisfactory introduction.

HUDSON RALPH GORTON

An introduction to electronics. New York The Macmillan Company 1945 97 p. illus. 22 cm. $3.30 1852a

Contents: The constitution of matter. The flow of electricity. Radio communication. Reproduction of sound and picture. Modern sources of light. More power to the electron. Diverse applications of electronics. Conversion factors. Index.

Note. An explanation of the science of electronics and a description of its applications in the fields of radio, television, photography, navigation, meteorology and medicine. The last two chapters also discuss electronic switches and the electron microscope, the radiosonde, and other recent applications. Although intended for the layman with a limited knowledge of physics and chemistry, some technical terminology is employed. The author is Professor of Electrical Engineering at the Massachusetts Institute of Technology.

LEE REUBEN

Electronic transformers and circuits. New York John Wiley & Sons Inc. 1947 282 p illus 24 cm. $4.50 1853

Contents: Introduction. Transformer construction, materials, and ratings. Rectifiers, transformers, and reactors. Rectifier performance. Amplifier transformers. Amplifier circuits. Higher frequency transformers. Electronic control transformers. Pulse and video transformers. Appendix: Analysis of step-up transformers for square waves. Step-down transformers. Linearity of sawtooth transformers. Analysis of voltage rise in a reactor. Bibliography. Index.

Note: Transformers are important components of electronic circuits, yet many electronics engineers pay little attention to their design. This work has been written for engineers already engaged in the design of electronics apparatus and for advance engineering students preparing for such work. It offers an illuminating and thorough treatment of the principles of electronic transformer design and, also, of the relationships between transformer characteristics and the behavior of the circuit of which the transformer is part. The author is an Advisory Engineer for the Westinghouse Electric Corporation.

MARKUS, JOHN AND VIN ZELUFF

Handbook of industrial electronic circuits. New York McGraw Hill Book Company, Inc. 1948 272 p illus. 29 cm. $6.50 1854

Contents (abridged): Audio-frequency circuits. Capacitance control circuits. Cathode-ray circuits. Control circuits. Counting circuits. Direct-current amplifier circuits. Electronic switching circuits. Limiter circuits. Measuring circuits. Metal-locating circuits. Motor control circuits. Multivibrator circuits. Oscillator circuits. Photoelectric circuits. Power supply circuits. Stroboscopic circuits. Telemetering circuits. Temperature-control circuits. Timing circuits. Ultrasonic circuits. Welding control circuits. Index.

Note: A very useful compilation of circuits which have been developed for various industrial—as contrasted to communication—applications. Four hundred and thirty-three circuits are illustrated in wiring diagrams and explained in an adequate accompanying text. Most of the material was published first in the periodical *Electronics*, but some of it has been reproduced from other periodicals. Values of the circuit components are given and there is some description of performance characteristics.

RICHTER, WALTHER

Fundamentals of industrial electronic circuits. New York McGraw Hill Book Company Inc., 1947 569 p illus. 23 cm. $5.00. 1855

Content (abridged): Fundamentals of direct current. Alternating currents. Resistance, inductance, and capacitance in alternating-current circuits. Nonlinear conductors. Emission: space charge; effect of gas in a tube. Fundamentals of rectifier circuits. The triode. Single stage amplifier performance. Bucking or compensating circuits. Multigrid tubes. Power relations in alternating-current amplifiers. Multistage amplifiers. Detection. Properties of tuned circuits. Beat-frequency oscillators. Relaxation oscillators. Gaseous tubes and their characteristics. Fundamental control circuits for gaseous tubes. Photoelectric tubes. Optical systems. Amplifier circuits for photoelectric cells. Cathode-ray tubes. Equipment for cathode-ray oscilloscopes. Index.

Note: Although this textbook is designed for persons without an extensive knowledge of mathematics, it is not a descriptive treatment of the industrial applications of electronics, but deals instead with basic principles and apparatus. Problems, suggested additional reading matter and references to related publications are given with each chapter. The book is based on material used by the author in teaching an evening course at the University of Wisconsin, and is intended for use in similar courses and also by engineers or technicians who had no opportunity to study electronics while in school.

RIDER JOHN FRANCIS

Inside the vacuum tube. Illustrated by Baxter Rowe. New York John F Rider Publisher, Inc., 1945 413 p illus 22 cm. $4.50. 1856

Contents: Introducing the electron. Electron emission. Movement of charges. Space charge and plate current. Fundamentals of tube characteristics. The diode. The triode. Static characteristics of triodes. Triode dynamic characteristics and load lines. Dynamic transfer characteristics. Voltage amplification. The tetrode and pentode vacuum tubes. The cathode circuit. Power amplifiers. Miscellaneous vacuum tubes. Appendix. Index.

Note: An elementary presentation of electronics aimed specifically at the reader who lacks scientific education. Cartoon-type illustrations are used freely in the preliminary chapters to convey various fundamental concepts, and several two-colored anaglyphs give the reader a three-dimensional picture of such ideas as the arrangement of lines of force around the electron and the proton. The first five chapters will interest general readers, the remainder which are more difficult will appeal mainly to radio amateurs and other persons seriously interested in understanding electronic circuits and tubes.

RYDER, JOHN DOUGLAS

Electronic engineering principles. New York Prentice-Hall, Inc. 1947 397 p. illus. 23 cm. (Prentice-Hall electrical engineering series W L. Everitt editor) $6 65 1857

Contents: The fundamental particles. Electron ballistics. The cathode-ray tube. Thermal and field emission of electrons. Space charge in vacuum tubes. Diode rectifiers. The vacuum triode. The triode amplifier—small signals. Multi-element tubes. The amplifier—large signals. Secondary emission. Gaseous conduction. Gas diodes. Gas control tubes and circuits. Photoelectric emission. Photoelectric cells. Appendix.

Note. The first major use of electron tubes was in radio; hence electronics has traditionally been treated as a branch of radio engineering. However electron tubes have long been used in many applications that are unrelated to radio. This fact is recognized in this excellent new text, in which the fundamental principles and phenomena of electron tubes are discussed from the viewpoint of the engineering student who may eventually be concerned with electron tubes in any one of many applications. The mathematical and electrical concepts introduced require a knowledge of differential equations and alternating-current network theory. The author is Professor of Electrical Engineering at the University of Illinois.

SOLLER, THEODORE AND OTHERS editors

Cathode ray tube displays edited by Theodore Soller, Merle A. Starr and George E. Valley Jr Office of Scientific Research and Development, National Defense Research Committee. New York McGraw Hill Book Company Inc., 1948 746 p. illus. 23 cm. (Massachusetts Institute of Technology Radiation Laboratory series Louis N Ridenour editor in-chief Vol. 22) $10.00 1858

Contents: Foreword, by L. A. DuBridge. Introduction. Cathode-ray tubes. Focus coils and focus magnets. Circuit techniques. Position-data transmission. Electronic markers and indices. Deflection-modulated displays. Deflection coils. Pattern distortions on magnetic cathode-ray tubes. Sweep amplifiers for reactive loads. Rectangular coordinate displays. Special deflection coils for off-centering. Radial-time-base displays. Sector-display indicators. Range-height displays. Mechanical and optical devices. Spot size. Screens for cathode-ray tubes. Appendices. Index.

Note. A description of the *Radiation Laboratory series* as a whole may be found under number 1924 in this bibliography. This volume provides a technical account of the fundamental principles, design, construction, and operation of devices which employ cathode ray tubes. Specific units, such as focus coils, generators, amplifiers, and specialized circuits used in building up a display system are described in detail. Television displays are only briefly mentioned. As in other volumes of the series, each chapter has been prepared by a different author or group of authors.

SPANGENBERG, KARL RALPH

Vacuum tubes New York McGraw Hill Book Company, Inc., 1948 860 p illus. 23 cm. (McGraw Hill electrical and electronic engineering series, Frederick Emmons Terman consulting editor) $7.50 1859

Contents: Introduction. Basic tube types. Electrons and ions. Electronic emission. Determination of potential fields. Laws of electron motion. The electrostatic field of a triode. Space-charge effects. Triode characteristics. Tetrodes. Pentodes. Noise in vacuum tubes. Electrostatic electron optics. Magnetic lenses. Cathode-ray tubes. Ultra-high-frequency effects in conventional tubes. Velocity-modulated tubes or klystrons. Magnetron oscillators. Photoelectric tubes. Special tubes. High-vacuum practice. Appendixes. Problems. Name index. Subject index.

Note: This volume, primarily a text for graduate electrical engineering students, is also a useful reference work for electronic engineers engaged in the design of vacuum tubes, and for radio technicians requiring a detailed knowledge of the characteristics of vacuum tubes. It discusses in terms of electron behavior the basic principles and theories underlying tube operation, and shows how these principles are applied in the design and construction of the wide variety of tubes now in general use. Except in the discussions of ultra-high-frequency tubes, no attempt is made to describe tube application and circuits. Pertinent literature is cited in footnotes. The book is based on courses in vacuum tube design given by the author at Stanford University.

STOKLEY, JAMES

Electrons in action. New York Whittlesey House, McGraw Hill Book Company Inc., 1946 320 p. illus. 21 cm. $3.50 1860

Contents. Modern miracles. They're called electrons. Electrons made free. Putting them to work. Talking around the world. Seeing beyond the horizon. Cosmic electronics. Light from electrons. Sounds for the future. Electrons in overalls. Measurement. Looking through matter. Smaller and smaller. Electrons in medicine. Faster and faster. Where it leads. Atomic energy. Appendix: Radar. Index.

Note. A popular survey of the applications of electronics. Radio, television, and radar get a fair share of space; but as much or more space is given to uses of electronics in such fields as medicine, microscopy radiography and industrial control. Mathematics is not employed; nevertheless the author has succeeded, usually by the use of well-chosen analogies, in describing electronic principles and devices in terms that the reader who lacks formal scientific education can understand. The author is a special writer and lecturer for the General Electric Research Laboratory.

VALLEY, GEORGE EDWARD, JR., AND HENRY WALLMAN editors

Vacuum tube amplifiers. Office of Scientific Research and Development, National Defense Research Committee. New York Mc Graw Hill Book Company Inc., 1948 743 p. illus. 23 cm. (Massachusetts Institute of Technology Radiation Laboratory series Louis N Ridenour editor in-chief Vol. 18) $10.00 1861

Contents: Foreword, by L. A. DuBridge. Linear-circuit analysis and transient response. High fidelity pulse amplifiers. Pulse amplifiers of large dynamic range. Synchronous and staggered single-tuned high-frequency bandpass amplifiers. Double-tuned circuits. High-frequency feedback amplifiers. Bandpass amplifiers: pulse response and general considerations. Amplifier measurement and testing. Low-frequency amplifiers with stabilized gain. Low-frequency feedback amplifiers. Direct-coupled amplifiers. Amplifier sensitivity. Minimal noise circuits. Measurement of noise figure. Appendices: Realizability of filters—Calculation of lead-tuning condenser—Drift of vacuum-tube characteristics under constant applied potentials. Index.

Note. An annotation on the *Radiation Laboratory series* as a whole will be found under number 1924 in this bibliography. Although it has application to radar engineering, the present volume is of wider interest. It deals generally with the design and characteristics of lumped-parameter circuits. A considerable part of the exposition is carried out in mathematical processes, which are based upon the Laplace transform. The work is of interest to graduate students and practicing communications engineers.

WESTINGHOUSE ELECTRIC CORPORATION

Industrial electronics reference book, by electronics engineers of the Westinghouse Electric Corporation. New York John Wiley & Sons Inc., 1948 680 p illus. 30 cm. $8.50. 1862

Contents (abridged) Physical background of industrial electronics, by E. U. Condon and E. G. F. Arnott. Vacuum tubes, by H. J Dailey, J. H. Findley and E. C. Olsen. Gas tubes, by D E. Marshall. Photoelectric devices, by W W Watrous and D. E. Henry. Industrial X-ray tubes, by Joseph Lempert. Cathode-ray tubes, by P K. Volz and P E. Grandmont. Circuit elements, by D G. Little. Rectifier circuits, by H. J. Bichsel. Amplifier circuits, by Reuben Lee. Circuits for industrial control, by H. J Bichsel. Transmission lines, by E. U Condon and William Altar. Mercury-arc rectifiers for power applications, by G. F. Jones and C. E. Marcum. Radio-frequency heating, by D. Venable and T P Kinn.

Power-line carrier by F S. Mabry Electronic instruments, by M. P Vera. Electrostatic precipitation, by E. H. R. Pegg. Electronic motor control, by K. P Puchlowski. Applications of ultraviolet radiations, by H. C. Rentschler Care and maintenance of electronic apparatus, by C. J. Madsen. Index.

Note: Each of the 14 chapters in this volume presents concise digest of topic in electronics. Together they constitute comprehensive manual of information that will be useful to engineers responsible for the design or use of industrial electronics apparatus. The information is basic and general for example the chapter on electric motor control contains diagrams of many basic control circuits but contains no references to specific makes of control equipment. Mathematics is used freely and there has been no obvious attempt to avoid technical terminology but the exposition will be clear to most plant engineers and to other persons familiar with the terminology of electronics.

ZELUFF, VIN, AND JOHN MARKUS

What electronics does. New York Mc Graw Hill Book Company, Inc., 1948 306 p. illus 21 cm. $3.00 1863

Contents Static at work. Heat without heat. Red hot. Unheard sound. Seeing the invisible. In the air. Afloat. On the road. Riding the rails. Underground. Prying into nature. Pathfinders. Pure Metals. Tubes run machines. Measuring and counting. Fighting. Doctoring. Safety first. Index.

Note. An elementary survey of the many applications of electronics in fields other than radio and television. Electrostatic cleaners for air bean sorters, burglar alarms, electronic cookers, reading aids for the blind, and proximity fuses are only few of the hundreds of devices mentioned. The material is entirely descriptive.

COMMUNICATIONS ENGINEERING

GENERAL

BODE, HENDRIK WADE

Network analysis and feedback amplifier design New York D Van Nostrand Company Inc., 1945 551 p. illus. 22 cm. $7.50 1864

Contents (abridged) Mesh and nodal equations for an active circuit. The complex frequency plane. Feedback. Mathematical definition of feedback. General theorems for feedback circuits. Stability and physical realizability. Contour integration and Nyquist's criterion for stability. Physical representations of driving point impedance functions. Topics in the design of impedance functions. Topics in the design of equalizers. General restrictions on physical network characteristics at real frequencies. Relations between real and imaginary components of network functions. Graphical computation of relations between real and imaginary components of network functions. Application of general theorems to input and output circuit design. Application of general theorems to interstage network design. Design of single loop absolutely stable amplifiers. Index.

Note: A contribution of considerable importance to communications engineering. Its scope is general network theory with emphasis on the design of amplifiers, non-feedback as well as feedback. The work was originally prepared for use in courses given at the Bell Telephone Laboratories to engineers on the staff of that organization, hence the education in mathematics and physics of graduate engineers is assumed in the treatment. The material is related most directly to telephone circuits, but it has wide applications in automatic control and in radio also.

BRONWELL ARTHUR B AND ROBERT E BEAM

Theory and application of microwaves. New York McGraw Hill Book Company Inc. 1947 470 p. illus. 24 cm. (Radio communication series, Beverly Dudley consulting editor) $6 00 1865

Contents Introduction. Charges in electric fields. Current, power and energy relationships. The physical basis of equivalent circuits. Negative-grid triode oscillators and amplifiers. Transit-time oscillators. Magnetron oscillators. Transmission-line equations. Graphical solution of transmission-line problems. Transmission-line networks Transmitting and receiving systems. Pulsed systems—radar. Maxwell's equations. Propagation and reflection of plane waves. Solution of electromagnetic-field problems. Wave guides. Impedance discontinuities in guides—resonators. Applications of wave guides and resonators. Linear antennas and arrays. Impedance of antennas. Other radiating systems. Appendices. Index

Note This work provides a comprehensive introduction to the fundamental principles and computations pertinent to microwaves and to basic microwave apparatus. It should be useful not only to engineering students but also to engineers, particularly radio specialists, who completed their college work before ultra-short waves took on their current importance. Although the mathematics employed are not as advanced as in some works on microwaves, the authors have assumed that the reader will have at least the mathematical background of a senior engineering student. Worked examples and problems for the user to solve are provided.

KING RONOLD WYETH PERCIVAL

Electromagnetic engineering. Volume 1 Fundamentals. New York McGraw Hill Book Company Inc., 1945 580 p. illus. 22 cm. (Radio communication series, Beverly Dudley consulting editor) $6.00. 1866

Contents. Mathematical description of matter—Stationary states—The sensitivity scale. Mathematical description of space and of simple media—The field equations—Integral forms of field equations—Simple media. Transformation of field and force equations—Potential functions and the general wave equation—Energy functions—Periodic time dependence. Electromagnetic waves in unbounded regions—Waves of potential—Electromagnetic waves—Radiation of energy—General theorems. Skin effect and internal impedance—Skin effect in a solid cylindrical conductor—Skin effect in a tubular conductor—Skin effect in a conducting plane—Skin effect in a circular condenser. Electric circuits—Analytical foundations—Near-zone and quasi-near-zone circuits—Balanced two-wire and four-wire transmission lines. Appendix. List of books. Problems. Index.

Note The first of a projected series of textbooks designed for advanced students who are preparing for research or engineering careers in fields where a thorough understanding of the physical and mathematical bases of microwave phenomena is required. It is based largely on material used in courses offered at the Cruft Memorial Laboratory at Harvard University

KIVER, MILTON S

U H F radio simplified. New York D Van Nostrand Company Inc., 1945 238 p illus. 22 cm. $4 50 1867

Contents. Introduction to the higher frequencies. The magnetron oscillator The klystron. Transmission lines at the U. H. F.'s. Wave guides. Cavity resonators. U. H. F. antennas. U. H. F. measurements. Wave propagation. Questions Index. References.

Note: This brief introduction to ultra-high-frequency theory and applications is suitable for such persons as radio amateurs and repairmen who have some knowledge of standard radio. The exposition is concise and is couched in technical terms but advanced mathematics is avoided. The book is eminently suitable for home study without an instructor.

MARCHAND NATHAN

Ultrahigh frequency transmission and radiation. New York John Wiley & Sons, Inc. 1947 322 p. illus 23 cm. $4.50. 1868

Contents: Transmission lines. Elements of vector analysis. Fundamental electromagnetic equations. Plane electromagnetic waves. Radiation. Antenna arrays. Wave guides. Complex transmission line network analysis. Tables: Characteristic impedances of transmission lines. Degrees to radians. Natural sines, cosines, and tangents. Exponential and hyperbolic functions. Bessel functions. Index.

Note. The material in this volume was first presented by the author in a government sponsored course at Columbia University in 1943. Chiefly the work is an introductory exposition of advanced mathematical methods of attacking problems that arise in the design of ultrahigh frequency radio apparatus. The characteristics of standard circuit elements also are described. The book is addressed to graduate students and practicing communications engineers. References for further reading and a collection of problems to be solved accompany each chapter

MENZEL, DONALD HOWARD

Elementary manual of radio propagation. New York Prentice-Hall, Inc., 1948. 222 p. illus. 29 cm. (Prentice-Hall electrical engineering series, W L. Everitt, editor) $7 65 1869

Contents: What happens to a radio wave? The use of maps and charts in radio propagation problems. Structure of the ionosphere and world MUF maps. Preparation of great-circle maps. Evaluation of distance between two stations. Determination of maximum usable frequencies. The absorption problem and radio noise. Calculation of lowest useful high frequencies. Variability of the sun. Ionospheric variations. Ground wave transmission. Problems of broadcast and lower frequencies. Some introductory remarks about VHF, UHF and SHF. The calculation of coverage diagrams for standard atmospheric conditions for radio frequencies greater than 30 megacycles. The field in the shadow zone under standard conditions. How atmospheric conditions cause large variations from standard-set performance. M curves, an index of expected coverage. Propagation effects deduced from weather conditions. Operational applications in tropospheric propagation. Appendices: Theory of ionospheric propagation. Theory of tropospheric propagation. Definitions. Index.

Note. The manual, an elaboration of a training pamphlet written by the same author for the instruction of personnel of the U. S. Navy, is designed to help the radio operator and communications officer understand the phenomena which underlie wave propagation, and to give practical instruction in preparation and use of maps and nomograms in radio propagation problems. The plain and vivid exposition, together with the numerous illustrations and examples, makes it well suited for use in organized classes and also in self instruction. The author is Professor of Astronomy and Astrophysics at Harvard University.

MORENO THEODORE

Microwave transmission design data. New York McGraw Hill Book Company Inc., 1948 248 p illus. 23 cm. (Radio communication series Beverly Dudley consulting editor) $4 00 1870

Contents: General considerations for microwave transmission lines. Attenuation, impedance matching, and reflections on transmission lines. Impedance relations on transmission lines. General formulas for coaxial lines. Flexible cables. Coaxial line structures and transformers. General formulas for wave guides. Attenuation in wave guides. Obstacles, discontinuities, and junctions. Miscellaneous wave-guide structures. Wave guides filled with dielectric material. Dielectric materials. Cavity resonators. Index.

Note. The purpose of this volume is to furnish electrical engineers with a compact source of technical data essential to the design and construction of ultra-high-frequency transmission lines and related equipment. Although the three preliminary chapters deal with the general theory of transmission lines, the book as a whole stresses the practical aspects of microwave equipment design. The volume is essentially a thoroughly revised and expanded version of a wartime report prepared by the Sperry Gyroscope Company in 1944.

OLSON HARRY FERDINAND

Elements of acoustical engineering. Second edition. New York D Van Nostrand Company Inc., 1947 539 p illus 23 cm. $7.50 1871

Contents. Sound waves. Acoustical radiating systems. Mechanical vibrating systems. Dynamical analogies. Acoustical elements. Direct radiator loud speakers. Horn loud speakers. Microphones. Miscellaneous transducers. Measurements. Architectural acoustics and the collection and dispersion of sound. Speech, music, and hearing. Underwater sound. Ultrasonics and supersonics.

Note: (4450) This work, originally prepared as a course of lectures for presentation at Columbia University, is well known as a comprehensive text for advanced engineering students and graduate engineers. In the exposition, considerable stress is placed on analogies among mechanical, electrical and acoustical systems. In addition to the acoustical devices mentioned in the chapter titles, many others such as telephone receivers, phonographs, electric megaphones, wire recorders, hearing aids, sirens, underwater speakers and microphones are discussed. This edition has been substantially revised and extended. The number of illustrations has been increased by 145, and pages by 195 over the first edition.

RAMO SIMON

Introduction to microwaves New York McGraw Hill Book Company Inc. 1945 138 p. illus 21 cm. $2.25 1872

Contents. Similarities exist between microwaves and lower frequency electricity. Microwaves are very different from lower frequency electricity. Microwaves practically do not penetrate metal. Electrons travel slowly: thus transit time becomes an important concept. Moving electrons induce current. Time delay in electromagnetics becomes important for microwaves. Retardation and radiation influence basic circuit behavior at ultra-high frequency. Displacement current is as effective as more common current flow. A resonant cavity is a self-enclosed circuit. All conducting and dielectric boundaries are wave guides. Most engineering concepts of transmission lines are valid for microwaves. Hollow-pipes are practical guides for microwaves. Microwave phenomena may be thought of as the result of combining a series of various waves. Voltage, current, and impedance concepts have practical use at the highest frequencies. A microwave radiating system combines concepts from D.C. to light-wave frequencies. Appendix. Index.

Note. A non-mathematical explanation of microwaves designed for young engineers just entering the field of ultra-high-frequencies and for experienced electrical engineers who want a basic understanding of this increasingly important subject. Reader acquaintance with the characteristics of lower frequency electricity is assumed. There is a short list of textbooks recommended for further study. The author is associated with General Electric Company's research laboratory.

RIDER, JOHN FRANCIS

Installation and servicing of low power public address systems New York John F Rider Publisher Inc. 1948 204 p. illus. 20 cm. $1.89 1873

Contents. The fundamentals of sound. Microphones and phonograph pickups. Impedance matching. Amplifier specifications. Loud-speakers. Installation. Servicing.

Note. A practical manual intended primarily for the guidance of radio service men and radio engineers responsible for the installation of public address systems. More than half the volume deals with the basic principles of sound reproduction and with the principles that underlie the construction and operation of the various units constituting a public address system. The remainder of the volume describes actual methods of installation for a variety of indoor conditions, and troubleshooting routines.

SKILLING HUGH HILDRETH

Fundamentals of electric waves. Second edition. New York John Wiley & Sons, Inc., 1948 245 p illus. 24 cm $4 00 1874

Contents: Experiments on the electrostatic field. Vector analysis. Certain theorems relating to fields. The electrostatic field. Electric current. The magnetic field. Examples and interpretation. Maxwell's hypothesis. Plane waves. Reflection. Radiation. Antennas. Wave guides. Waves in the ionosphere. Index.

Note (730) A discussion for advanced students and graduate engineers of the development of Maxwell's electromagnetic equations and its application to the radiation, propagation, and transmission of radio waves. The reader is supposed to have a knowledge of basic physics and of mathematics through calculus, and the exposition is expressed chiefly in mathematical terms. Substantial changes have been made for this edition. These include discussions of wave propagation in ionized regions and in semi-conducting media, revised treatments of antennas and wave guides, and more material on reflection from the ionosphere and from ground surfaces.

SMITH CARL EDWIN

Applied mathematics for radio and communication engineers. New York McGraw-Hill Book Company Inc. 1945 336 p. illus. 22 cm. $3.50 1875

Contents Arithmetic. Logarithms. Algebra. Geometry. Trigonometry. Vector addition. Complex quantities. Curves and graphs. Simultaneous equations. Quadratic equations. Hyperbolic trigonometry. Differential calculus treating algebraic functions. Differential calculus treating transcendental functions. Integral calculus. Series and wave forms. Appendix. Index. Answers to exercises.

Note The material in this book was originally issued in a home-study course, but here it has been supplemented with exercises and organized so that it may be used also in courses under the guidance of instructors. It is addressed primarily to men already at work in the communications industries. Although some of the material in the later chapters is rather advanced, the book is self-contained and no previous education in mathematics is assumed. The appendix contains a variety of useful data and tables including a table of Bessel functions.

STILL, ALFRED

Communication through the ages from sign language to television New York Murray Hill Books Inc. 1946 201 p. illus. 21 cm. $2 75 1876

Contents: The writer's aim. Drums, fire, and smoke. Rays of light. Sparks of electricity. Streams of electrons. Pioneers. Beneath the ocean. The telephone. Electrons through space. Radiotelephony and television. Communication without words. Chronological table. Index of names. Index of subjects.

Note: A short history of the telegraph, telephone, radio, and other means of signal communication, written in non-technical language and intended for the layman.

UNITED STATES NATIONAL BUREAU OF STANDARDS CENTRAL RADIO PROPAGATION LABORATORY

Ionospheric radio propagation. Washington, D C. Government Printing Office, 1948 209 p illus. 26 cm. (United States. National Bureau of Standards. Circular 462) Paper $1.00. 1877

Contents: Introduction. Theory of radio wave propagation. Measurement technics. Structure of the ionosphere. Variations of the ionosphere. Maximum usable frequencies. Ionospheric absorption and sky-wave field intensity. Radio noise and required field intensity. Lowest required radiated power and lowest useful high frequency. Appendix: The mks system of units. Index.

Note: The purpose of this book is to present the elementary principles of sky-wave or ionospheric radio-wave propagation at high frequencies and their practical application to the problems of radio communication. It summarizes current knowledge and techniques of making radio-propagation calculations, and presents in simple form the physical and mathematical theory underlying the subject. References for further reading are given at the ends of the chapters. The scope of the volume is limited to those waves which are propagated over long distances by reflection from the ionosphere.

UNITED STATES RADIO RESEARCH LABORATORY HARVARD UNIVERSITY

Very high frequency techniques compiled by the staff of the Radio Research Laboratory Harvard University under the editorial direction of Herbert J Reich, editor Louise S McDowell, asst. editor New York McGraw Hill Book Company Inc. 1947 2 v illus 23 cm. $14 00 per set. 1878

Contents (abridged) Volume I: Broad-band antennas, by A. Alford. Ultrahigh-frequency measurements, by J A. Nelson, D Lazarus, J. W Christensen, and R. R. Buss. Impedance matching, transformers and baluns, by J A. Nelson and G. Stavis. Cone and cylinder antennas, by A. Dorne. Sleeve antennas, by R. L. Bock, J. A. Nelson, and A. Dorne. Horns and reflectors, by G. Stavis and A. Dorne. Slot antennas, by A. Dorne and D. Lazarus. Auxiliary devices for antennas, by R. L. Bock and J Margolin. Principles of direction finding, by A. Alford, J D. Kraus, and K. C. Berkofsky. Antennas for direction finders, by J. D Kraus, H. E. Clark, K. C. Berkofsky, and G. Stavis. Indicators for direction finders, by W McGuigan. Homing systems, by J. W Christensen. Introduction to power generation, by J. F Byrne. Triode and pentode ultrahigh-frequency oscillators, by E. A. Yunker J. F Byrne, J G Stephenson, and M. R. Adams. Coaxial-line power amplifiers and oscillators, by W R. Rambo. Power output coupling methods, by J G. Stephenson. Modulation of high-frequency power oscillators, by J. G. Stephenson and W R. Rambo. General design considerations of high-power ultrahigh-frequency triode and tetrode oscillators, by W G. Dow and G. Hok. The resnatron, by W G. Dow and H. W Welch. Principles of magnetron operation, by G. Hok and W G. Dow. Operating characteristics of continuous-wave magnetrons, by G. Hok. Description, characteristics, and operation of typical cavity magnetrons, by G. Hok, H. W Welch, and W G. Dow. Volume II: Externally tuned magnetron oscillators, by H J Reich. Power-measuring devices for ultrahigh frequencies, by E. A. Yunker H. C. Early G. Hok, and G. R. Bridgeford. Receivers—general considerations, by J. M. Pettit. Principles of transmission-line filter design, by S. Cohn. Design of transmission-line filters, by S. Cohn. Tuners for microwave receivers, by S. Cohn, R. A. Soderman, S. J Griffin, and R. O. Petrich. Detectors and mixers, by R. A. Soderman. Local oscillators—general considerations and butterfly oscillators, by R. A. Soderman, W H. Huggins, and F J Kamphoefner—reflex-klystron oscillators, by W H. Huggins, R. O. Petrich, and J. W Kearney—wide-band coaxial-line resonators, by W H. Huggins, H. M. Kohler, and L. A. Manning. Intermediate-frequency amplifiers, by M. T Lebenbaum. Receiver output circuits, by R. R. Buss, J D. Noe, C. B. Clark, and H. E. Overacker. Measuring equipment for receivers, by W B Whaley. Bibliography. Index.

Note. The Laboratory mentioned in the title of this set was an OSRD project set up primarily for the development of radar countermeasures during World War II. The work does not, however, give a systematic account of the problems or work of the Laboratory. Instead it deals with circuits, apparatus and techniques used or developed by the Laboratory that appear to have broader applications or interest.

WIENER, NORBERT

Cybernetics or Control and communication in the animal and the machine. New York John Wiley & Sons, Inc., 1948 194 p. 24 cm. $3 00. 1879

Contents: Introduction. Newtonian and Bergsonian time. Groups and statistical mechanics. Time series, information, and communication. Feed-back and oscillation. Computing machines and the nervous system. Gestalt and universals. Cybernetics and psychopathology. Information, language, and society.

Note: That there are close parallels between the human brain and such electro-mechanical devices or electrical networks, electronic computers, and servomechanisms in general, may be a difficult idea for laymen and even scientists to accept. However, the similarities are numerous enough to permit the application of identical concepts in statistical mechanics to the analysis of the behavior of both types of systems, the electro-mechanical and the nervous. The results of investigations that have been undertaken from this viewpoint appear to have opened up a significant new field of study, to which the author and his colleagues have given the name cybernetics. This is the first popularly-published book on the subject. It is general and informative and is addressed chiefly to persons with scientific or technical backgrounds, particularly physiologists, psychiatrists, communications engineers, mathematicians, and physicists.

YOUNG VICTOR JAY

Understanding microwaves. New York John F Rider Publisher Inc., 1946 385 p. illus. 22 cm. $6.00 1880

Contents: The ultra high frequency concept. Stationary charge and its field. Magnetostatics. Alternating current and lumped constants. Transmission lines. Poynting's vector and Maxwell's equations. Waveguides. Resonant cavities. Antennas. Microwave oscillators. Radar and communication. Microwave terms, ideas, and theorems. Index.

Note: Although designed as an introduction, this book is not intended for lay readers but is designed instead for persons who are already well grounded in the principles of ordinary radio, or who have had some education in other branches of electricity. For readers with suitable backgrounds, it provides an excellent introduction to the terminology and theory of the field, and to the fundamental principles and practice that govern the design of generating and receiving apparatus for waves shorter than ten centimeters. The author has not employed mathematics extensively in the exposition, nevertheless a knowledge of calculus is necessary for grasp of the entire text.

RADIO

ALBERT ARTHUR LEMUEL

Radio fundamentals. New York McGraw Hill Book Company Inc., 1948 595 p illus. 23 cm. $4.50 1881

Contents: Fundamentals of acoustics. Electrical fundamentals. Series and parallel resonant circuits. Power transfer and impedance matching. Transmission lines, cables and networks. Vacuum tubes. Rectifiers. Voltage amplifiers. Power amplifiers. Oscillators. Modulation and demodulation. Radio transmitters. Antennas and radio transmission. Radio receivers. Index.

Note: An elementary presentation for radio technicians, radio amateurs, and other persons who have a serious interest in the

subject. Advanced mathematics is avoided in the presentation never theless rather advanced topics are discussed. For example, approximately sixty pages are devoted to antenna characteristics and radiation patterns. The basic principles and unusual features of specialized apparatus, such as point-to-point transmitters, also are explained. The book is organized for use as text in extension and vocational courses, but it is also suitable for home study

AMERICAN RADIO RELAY LEAGUE

The radio amateur's handbook, by the headquarters staff of the American Radio Relay League. Twenty-fifth edition. West Hartford, Conn. The American Radio Relay League Inc. 1948 608 p illus 24 cm. Paper $2 00 1882

Contents (abridged) Amateur radio. Electrical laws and circuits. Vacuum-tube principles. High-frequency communication. Power supplies. Keying and break-in. Radiotelephony Antennas and transmission lines. V.H.F receivers. V.H.F transmitters. V.H F antennas. U.H.F and microwaves. Measuring equipment. Assembling station. The amateur's workshop. Operating station. Message handling. Emergency operation. League operating organization. Vacuum-tube data. Index.

Note (1815) An internationally-known manual. It is carefully organized and written to serve the needs of amateur radio enthusiasts and operators, and the treatment is based on the assumption that the reader will be studying without the guidance of an instructor Radio theory is discussed, but the greater part of the material pertains to the functions, characteristics and details of apparatus. Valuable supplementary information on message handling, etc. is included. The work is published annually and each new issue embodies some revision. However in this edition it has been given an extensive revision. There are three new chapters and numerous changes in the older ones. As usual, there is section of advertising pages.

ENNES HAROLD E.

Broadcast operators handbook. New York John F Rider Publisher Inc. 1947 265 p illus. 22 cm. $3.30 1883

Contents Part I, Operating in the control room and studio What you're up against. Are mechanical operations apparent? Keeping sound "out of the mud" You're often producer too. Put that mike there! by Bert H. Korbitz. Part II, Operating the master control: Where split seconds count. Part III, Operating outside the studio Remote control problems. Remote versus studio pickups Remote musical pickups. Eye-witness pickups and mobile transmitters. The live symphony pickup, by Bert H. Korbitz. Part IV Operating the transmitter: Operator's duties. Programs are entertainment. Measuring noise and distortion. Part W're off the air Emergency shutdowns. Why preventive maintenance. Preventive maintenance instructions. Part VI, Technically speaking: Control room and studio equipment. The broadcast studio. Selecting the broadcast transmitter location. Bibliography Appendix.

Note. This volume fills definite need in the field of radio broadcasting. While there is much in print on the manufacture and repair of radios and on radio engineering, there is remarkably little on the work of the broadcast control technician. This simple, practical manual covers in considerable detail the technical and routine jobs, trouble shooting and maintenance of equipment, monitoring and handling studio and master controls, the filling in of reports, and all the other duties required either at the studio, the transmitter, or on special remote control hook-ups. It should be welcome aid to persons who are planning to enter the field and also to persons already employed in it.

FREEDMAN SAMUEL

Two-way radio Chicago Ziff Davis Publishing Company 1946 506 p illus. 24 cm. $5.00 1884

Contents Introduction to two-way radio. Two-way radio planning. Power supply The mobile station The fixed station. The antenna system. Amplitude modulation equipment. Frequency modulation equipment. Induction radio and guided carrier systems. Frequency modulation Microwaves. Two-way radio for railroads. Police, fire, and forestry services. Highway and public transportation. Marine applications. Aeronautical applications Personalized applications. Maintenance and repair. Licenses and regulations. Typical radio systems. Index.

Note This book provides comprehensive survey of the applications and potential uses of two-way radio systems. Where installations in specific field have already been made, these installations and their equipment are described. In fields where potential uses exist but practical installations have not been made, the potential uses are surveyed. Although many technical problems are discussed, the book will be of more interest to persons concerned with exploring the uses of two-way radio and planning communication systems based on it, than to radio engineers concerned with research in the field.

HENNEY KEITH

Principles of radio Fifth edition. New York John Wiley & Sons, Inc. 1945 534 p. illus. 20 cm. $3 75 1885

Contents Fundamentals. Direct-current circuits. Electrical meters and measurements. Production of current. Magnetism and electromagnetism. Inductance. Capacitance. Properties of alternating-current circuits. Resonance. Properties of coils and condensers. Vacuum tubes The tube as an amplifier Rectifiers and power supply apparatus, Audio amplifiers. Detection. Receiver systems. Oscillators. Transmitters. Antennas and electromagnetic radiation. Frequency modulation. Ultra-high-frequency phenomena. Electronic instruments. Radar Index.

Note (1847) The fundamentals of electricity and radio written primarily for home study and requiring knowledge in mathematics of only arithmetic and simple algebra. In this edition the chapters have been rearranged, and the material relating to direct-current circuits, electrical measurements, transmitters and oscillators has been expanded. New material dealing with frequency phenomena and electronic instruments has been added, while the chapter on facsimile and television transmission in the earlier edition has been omitted.

KIVER, MILTON SOL

F M simplified. New York D Van Nostrand Company Inc. 1947 347 p. illus. 21 cm. $6 00 1886

Contents Section I, The fundamentals of F M Introduction to frequency modulation. F M from phase modulation. F-M and interference. Section II, F M receiver principles High frequency oscillators. I. F amplifiers, Limiters. F-M detectors. Audio amplifiers and high fidelity Section III, F M transmitters, Commercial F-M transmitters. Section IV Receiver alignment F-M receiver alignment procedure. Section Commercial receivers: R. F tuners for F M receivers. Commercial F M receivers. Servicing F-M receivers. Index.

Note: A book for radio service men and laymen already familiar with the principles and terminology of amplitude modulation who wish to extend their knowledge to F M. The advantages of frequency modulation are discussed and the similarities and differences in servicing both systems are covered. There is an examination of the commercial applications of F M principles and design and various types of transmitters and receivers are studied. The book is amply provided with explanatory charts and, in number of instances, diagrams of specific transmitters and receivers have been supplied by the manufacturers.

MCNICOL DONALD

Radio s conquest of space the experimental rise in radio communication. New York Murray Hill Books, Inc., 1946 374 p. illus. 22 cm. $4 00 1887

Contents Electricity the forerunner High voltage by induction. Advances in electrical knowledge. Electromagnetic waves. "Wireless" ventures from the laboratory First steps in America. Interstation selectivity Improving transmitters. Working toward antenna improvement. Spark gaps and oscillators Development of electric wave detectors. Improvements in detectors. Wireless spans the Atlantic. The nature of wireless radiation. The magic bulb Vacuum tube development Electric wave propagation The trend to shorter wave lengths. The problem of atmospheric noise. The audion applied to wire telephony Early wireless telephony Vacuum tubes and radio-telephone transmitters. Radio receivers. Regenerative receivers. Revolutionary receiver developments. The advent of commercial radio. Transmission progress. Children of the audion. Delivery of the service. The expanding sphere of radio Name index. Subject index.

Note This book traces the development of radio as the result of the experiments and inventions of many men. It takes into account not only the great inventions, such as the vacuum tube, but also

later ones, such as push-pull amplification. The names of men and of companies associated with the development are mentioned, and references are incorporated in the text to investigations and papers that marked important advances. The book is addressed to persons with some knowledge of radio principles and terminology

MAEDEL GEORGE FREDERICK

Basic mathematics for radio New York Prentice-Hall Inc., 1948 339 p. illus. 24 cm. $4 75 1888

Content (abridged) Section I, Arithmetic. Section II, Algebra. Section III, Arithmetic and algebra. Section IV Plane and solid geometry Section , Radio mathematics. Index. Tables.

Note: An exposition of some of the simpler mathematical concepts and operations which are essential knowledge for radio operators, radio servicemen, and radio engineers in their routine work. It may be used as text in vocational and technical school courses, and for purposes of self-instruction. As might be expected, many of the exercises and problems, included in each chapter, illustrate the application of mathematical principles to the solution of radio and electrical engineering problems

MANLY HAROLD PHILLIPS, AND L. O GORDER

Drake's cyclopedia of radio and electronics a reference and instruction book radio sound systems, television photoelectricity electronic tubes and electronics in industry Twelfth edition. Chicago Frederick J Drake & Co., 1946 unpaged. illus. 23 cm $6 00 1889

Note: (3831) A reference book for students of radio and television and for repairmen and dealers in radio and television apparatus The exposition is in the form of short articles on specific small topics, which are arranged alphabetically for quick reference. This edition has been very substantially revised and expanded.

MARCHAND NATHAN

Frequency modulation fundamentals apparatus servicing. New York Murray Hill Books Inc. 1948 409 p illus. 23½ cm. $5 00. 1890

Contents Fundamentals of modulation. Fidelity and band-width requirements Noise and interference. Direct frequency modulation. Frequency control circuits Direct frequency-modulation transmitters. Phase-to-frequency modulation. Frequency-modulation transmitters using phase modulation. Frequency-modulation detectors. Amplitude limiters. Radio-frequency amplifiers, oscillators, and converters. Intermediate frequency and audio circuits. Frequency-modulation receivers. Frequency-modulation transmitting antennas. Frequency-modulation receiving antennas. Mobile frequency modulation equipment. Frequency-modulation test equipment. Frequency-modulation servicing. Answers to questions. Appendix. Index.

Note: A basic textbook for practical students such as radio amateurs and radio repairmen. The treatment assumes that the reader will have knowledge of standard radio principles and apparatus Mathematics is used sparingly nevertheless the uses of few advanced mathematical techniques, for example Bessel functions, are explained. The various methods of modulating radio signals are outlined, then the specific principles that underlie frequency modulation apparatus and techniques are described fully. Many circuit diagrams are included and enough construction detail is provided to enable the amateur radio operator to construct F-M apparatus. The book is suitable for use in both classroom and self-instruction.

MARCUS ABRAHAM AND WILLIAM MARCUS

Elements of radio prepared under the editorship of Ralph E Horton. Second edition. New York Prentice-Hall, Inc. 1948 751 p. illus. 21 cm. $4.25 1891

Contents (abridged) Part History of communication. Wire stations A simple radio receiving set. The aerial ground system. The tuner. The reproducer The detector Electron flow in the aerial-ground system. Electron flow in the tuning circuit. Electron flow in the crystal detector and phones. The regenerative detector. The audio-frequency amplifier The ac-dc power supply. The dynamic speaker The radio-frequency amplifier The superheterodyne receiver Types of vacuum tubes. Modern radio receivers. Part II. Direct current and the nature of electricity Magnetism, motors, and measuring instruments. Alternating currents—theory and measurement. Resonant circuits and tuning principles. Radio antennas for transmitters. Vacuum-tube amplifiers. Vacuum-tube oscillators. The continuous-wave (CW) transmitter The modulated-wave transmitter The cathode-ray tube and its applications. Demonstrations. Appendix. Index.

Note (3835) A carefully constructed textbook, designed for use in vocational school courses and for self-instruction. It contains more material than is commonly presented in simplified books. Mathematics is not employed in the first part, but in the second part the student needs some understanding of elementary algebra and trigonometry In this edition, symbols and terminology have been revised, the chapter on direction finding has been eliminated, and the chapter on modern radio receivers has been added.

MARCUS, WILLIAM, AND ALEX LEVY

Elements of radio servicing. New York McGraw Hill Book Company Inc., 1947 475 p illus. 23 cm. $4.50 1892

Contents (abridged) Superheterodyne receivers. Multimeters. Signal generator AC power supply Loudspeakers. Second or power audio-amplifier stage. First audio-amplifier stage. Detector stage—AVC. IF amplifier stage. Converter RF amplifier stage. Antennas. AC/DC power supply Automobile radio installation. Auto radio power supplies. Push-pull output stage. Survey of the servicing procedure. The service bench. Appendix. Index.

Note: The factual information and repair methods needed in analyzing and overcoming faulty operation of home or auto radio receivers and radio-phonographs is presented here in readily understandable manner. The volume is designed as text for the novice and as reference manual for the experienced repairman. Since most receivers of the past ten years use the superheterodyne circuit, repairs to this type of radio are emphasized. There are more than 530 illustrations, and review questions are included at end of the chapters. Reader familiarity with elementary radio theory and terminology is presupposed, although much theory is given wherever it serves to clarify particular procedure.

MAUTNER, LEONARD

Mathematics for radio engineers New York Pitman Publishing Corporation 1947 327 p 24 cm. illus. $5.00 1893

Contents: A review of fundamentals. Logarithms. Circular trigonometric functions. Complex algebra. Hyperbolic functions. Determinants. Differential calculus. Series expansion. Integral calculus. Differential equations. Fourier series. Answers to problems. Index

Note. This book is intended to serve as refresher course in mathematics for practicing radio engineers who are college graduates, and as an instruction manual for those not possessing college degree but who have some knowledge of higher mathematics. It is designed for home study use. Most of the chapters stress the mathematical concepts and operations although practical applications are also included. The chapter on differential equations, on the other hand, omits the theoretical aspects of the subject and concentrates on applications to the solution of radio engineering problems. Practical exercises are given at the end of each chapter

NILSON ARTHUR REINHOLD, AND J L HORNUNG

Radio operating questions and answers Ninth edition. New York McGraw-Hill Book Company Inc. 1948 524 p. illus 19 cm $4.50 1894

Contents: Basic radio laws. Basic theory and practice [illegible] phone. Advanced radiotelephony Radiotelegraph. Advanced radiotelegraphy Appendices Operating abbreviations. Advice on obtaining commercial radio operators. Extracts from rules and [illegible] standard symbols. Index of diagrams and [illegible] Index of subjects. Addenda. Index of addenda subjects.

Note: (3837) Since its first appearance in [illegible] this book has been widely used as review of radio theory and practice by persons studying for government examinations for radio operator licenses. The new material in this edition is in the Addenda, an 17-page section devoted to questions and answers that have been added on FM radio and television and cover topics [illegible] asked as [illegible]

mentary to Elements 2, 3, and 4 of the Federal Communications Commission examinations.

RIDER, JOHN FRANCIS AND SEYMOUR D USLAN

F M transmission and reception. New York John F Rider Publisher, Inc., 1948 409 p illus. 21 cm. $3 60 1895

Contents Fundamental considerations. Frequency modulation. Essentials of F M transmitters. Transmitters of today The transmission of F-M signals. Receiving antennas. The F-M receiver Alignment of F M receivers. Servicing F M receivers. Appendix. Bibliography Index.

Note: This work is suitable for radio amateurs, radio repairmen, and others who already have knowledge of amplitude-modulated radio and of radio technical terminology The material is about equally divided between discussions of the basic principles and theory of F M transmission and reception, and description of the actual operation of various types of transmitters and receivers. The chapter on the servicing of F M receivers is brief A five-page bibliography of literature on frequency modulation is included.

SHREWSBURY, JAMES BEVERLY

An approach to radio Illustrations by Francis Mair Princeton Ky Electronic Industries 1947 288 p illus. 23 cm. $4.50 1896

Contents Radio transmission and reception. The audio oscillator The beat note receiver. The audio amplifier. Receivers for modulated signals. Receiver development Transmitter development. Power for transmitters and receivers. Conclusion.

Note A discussion of the fundamental principles of radio addressed primarily to the amateur and the person studying without an instructor No previous knowledge of physics, chemistry or advanced mathematics is necessary to understanding the text, and technical terms are used only after careful explanation of their meaning has been given. There are detailed directions for building an audio oscillator crystal set, and other construction projects that call for the application of principles discussed in the text. About half of the book is given to schematic diagrams and drawings that illustrate steps in carrying out the projects. These illustrations are unusually good and contribute much to the clearness of the presentation. There is no index.

SLURZBERG MORRIS AND WILLIAM OSTERHELD

Essentials of radio New York McGraw Hill Book Company Inc. 1948 806 p illus. 23 cm. $6.00 1897

Contents Introduction to radio Circuit analysis. Simple receiving circuits. Vacuum tubes Detector circuits. Tuning circuits. Radio-frequency amplifier circuits. Audio-frequency voltage amplifier circuits Power amplifier circuits Vacuum-tube oscillator circuits Power supply circuits. Audio units. Transmitting circuits Receiving circuits. Test equipment Appendix Index.

Note This text is intended for the use of radio students at the junior-college level. It provides rather thorough study of the operating characteristics and theory of vacuum tubes, resistors, inductors and capacitors, and of the basic radio circuits utilizing these elements. The book does not require knowledge of mathematics beyond that of elementary algebra, and all data required for the solution of problems, given at the end of each chapter are contained in the appendix. The appendix also includes list of symbols used in circuit drawings, accompanied by picture of the [illegible] represented, listing of letter symbols, and compilation of formulas used in radio and electronics calculations. The book is not revision of the authors' *Electrical essentials of radio* (1944) but is new work

TERMAN FREDERICK EMMONS

Radio engineering. Third edition. New York McGraw Hill Book Company Inc. 1947 969 p illus. 23 cm $7.00. 1898

Contents The elements of system of radio communication. Circuit elements. Properties of circuits with lumped constants. Circuits with distributed constants. Fundamental properties of electron tubes. Vacuum-tube amplifiers employing untuned load impedances. Tuned amplifiers. Vacuum-tube oscillators. Modulation. Vacuum-tube detectors and mixers. Sources of power for operating vacuum tubes. Miscellaneous aspects of tubes and circuits. Propagation of radio waves Antennas. Radio transmitters, receivers, and communication systems. Radio aids to navigation and radar. Television. Sound and sound equipment. Problems. Index.

Note So rapidly does radio engineering advance that each new edition of this standard text necessarily contains much material that was not in the previous one. Acoustic labyrinths, airplane landing systems, beat frequency oscillators, cavity resonators, color television, fluorescent screens, interlaced scanning, klystron, magnetic electron lens, permalloy radar and wave guides are few of the terms found in the index of the present edition that are not in that of the second edition. The work has been thoroughly revised not only to bring it abreast of the great advances of the last ten years, but also to shift the emphasis from comprehensive treatment of radio engineering principles and applications to thorough treatment of principles with applications introduced only incidentally The book is still intended to serve as text for senior students in engineering colleges. Footnote references to related literature have been largely eliminated on the assumption that the student will also have such works as the author's *Radio engineers'* handbook, New York. McGraw-Hill, 1943.

TUCKER DURWARD J

Introduction to practical radio New York The Macmillan Company, 1945 322 p. illus. 22 cm. $3.00 1899

Contents Introduction. Elementary electricity Ohm's law Resistance circuits. Direct-current power Equipment wiring Kirchhoff's laws. Magnetism. Electromagnetism. Alternating current. Electrical instruments. Inductance. Capacitance. Impedance. Appendix. Index.

Note An elementary text in which the functioning of the various elements of radio equipment, such as coils, condensers, vacuum tubes, batteries, wired circuits, and transformers, is described by reference to the basic principles of electricity Any mathematics required in the course of the discussion, from simple arithmetic to vector analysis, is briefly reviewed as the need arises. The book is intended chiefly for vocational school students and practical radio men. Review questions and problems are given at the end of each chapter

TURNER RUFUS P

Radio test instruments. New York Ziff Davis Publishing Company, 1946 221 p. illus. 24 cm $4.50 1900

Contents: Simple meters for current and voltage. Simple ohmmeters and volt-ohm-milliammeters. Vacuum-tube voltmeters. Wattmeters and decibel meters. Impedance meters. Capacitance checkers. Inductance checkers. Special purpose bridges and accessories. Oscilloscopes and accessories. R. F test oscillators and signal generators. A. F test oscillators. Frequency-measuring devices for radio frequencies. Frequency-measuring devices for audio frequencies. Audio amplifier testing devices. R. F signal tracers. Miscellaneous test equipment. Index.

Note The aim of this book is distinctly practical one—to provide circuit constants and related information plus calibration instructions for the radio repair man and laboratory technician. Radio and instrument theory are minimized, and most of the book is devoted to immediately useful technical data. It is thoroughly illustrated with circuit diagrams and photographs of the instruments described Reader knowledge of radio fundamentals is assumed.

WELLMAN, WILLIAM R.

Elementary radio servicing. New York D. Van Nostrand Company Inc., 1947 260 p. illus. 24 cm. $3 75 1901

Contents. Introduction Radio operations voltage analysis, resistance checking and signal tracing. The R.F amplifier The mixer oscillator or converter The I.F amplifier The detector and AVC circuits. The audio amplifier The power supply The loud speaker. Alignment. Miscellaneous troubles. Automobile radio. Battery—a.c. d.c. portable receivers—substitution of parts and tubes. Automatic frequency control—frequency modulation.

Note Instruction in radio servicing could hardly be reduced to simpler or more practical terms than it has been in this book. The author has assumed that his readers will have some knowledge of the construction of radio receivers and therefore has devoted no space to this subject. Also he has not used mathematics in his exposition. Instead the material is concerned with practical operations that are useful to the radio service man in locating and repairing trouble in radio receivers. All types of common repair

jobs, down even to repairs of wooden and plastics cabinets, are discussed. Most of the book is devoted to the home radio receiver, but phonographs, record changers, automobile and portable receivers are also covered.

TELEVISION

KIVER, MILTON SOL

Television and F M receiver servicing. New York D Van Nostrand Company Inc., 1948 212 p illus. 28 cm. Paper, $2 95 1902

Contents (abridged) The antenna system—operation and installation. Television receiver installation. Television test equipment. The television receiver—operation and servicing. Television receiver alignment. Trouble shooting television receivers. F-M fundamentals. Commercial F-M receiver circuits. F-M receiver alignment. F-M receiver servicing. Appendix: Allocation of television channels—metropolitan districts in the U S. Index.

Note A manual of practical information and directions for the installing and servicing of television receivers and FM radio receivers. It written for men about to enter the work or who are already engaged in it, especially men with experience in the servicing of AM radio receivers. Specific makes of receivers are not dealt with except incidentally; nevertheless, the information given will in many cases be more helpful than the instructions in manufacturers' manuals.

KIVER, MILTON SOL

Television simplified. Second edition. New York D Van Nostrand Company Inc., 1948 453 p illus. 21 cm. $6.00 1903

Contents The television field. U. H. F waves and the television antenna. Wide-band tuning circuits—R. F amplifiers. The H. F oscillator, mixer and I. F amplifiers. Diode detectors and A. G. C. circuits. Video amplifiers. D-C reinsertion. Cathode-ray tubes. Synchronizing circuit fundamentals. Deflecting systems. A typical television receiver—analysis and alignment. Color television. Frequency modulation. Servicing television receivers. Glossary. Appendix. Questions. Index.

Note A semi-technical presentation of basic knowledge which is designed chiefly for such technicians as radio repairmen who are already acquainted with standard radio but need an introduction to television. Because of the technical terminology employed, the book is not suitable for the average general reader. The first edition was published in 1944. Rather extensive changes were made in preparing the second edition. In addition to the revisions in the text proper, twelve pages of questions to facilitate use of the book in courses or in self-instruction were added.

RIDER, JOHN FRANCIS editor

Television—how it works. New York John F Rider Publisher Inc., 1948. 203 p illus. 28 cm. Paper $2 70 1904

Contents General aspects of the television system, by W. Bevis. Frequency characteristics of the television system, by S. D. Uslan. Television receiving antennas, by S. D. Uslan. R-F amplifier, oscillator and mixer circuits, by H. Chanon. The F-M sound channel, S. D. Uslan. The video I-F and detector section, by S. D. Uslan. Video amplifiers and D-C restorers, by H. Chanon. Synchronizing circuits, by R. F. Koch. Sweep circuits, by R. F. Koch. The picture tube, by W. Bevis. Power supplies, by H. Chanon. Alignment and servicing, by W. Bevis and H. Chanon. Troubleshooting chart.

Note Men already experienced in the maintenance and servicing of radio receivers are the intended audience for this book. The various chapters—written by members of the publisher's staff—are concerned for the most part with general principles and techniques rather than with details of particular receivers, but there are occasional mentions of special circuits in certain receivers. The work's purpose is to provide maintenance men and installers with background knowledge.

RADAR

FINK, DONALD G

Radar engineering. New York McGraw Hill Book Company Inc. 1947 644 p illus. 24 cm. $7.00. 1905

Contents Part 1, Radar fundamentals: Introduction to radar concepts. Principles of pulse generation and transmission. Radio-frequency fundamentals—transmission lines, waveguides, and resonant cavities—radiators and reflectors, propagation, and targets. Part II, Radar circuits and components: Introduction to radar design. Basic pulse circuits. Basic radio-frequency circuits and structures. Synchronizing equipment (timers). Transmitters and radiators. Receivers. Indicators and scanners. Radio-frequency measurements and test equipment. Index.

Note A work that is destined to occupy the same relative position in radar literature as the author's *Television engineering* holds in the field of television. The work is intended for the beginner in radar engineering, but the author has assumed that the reader will have background of radio engineering or the equivalent in technical education or experience. There are few references to related literature because at the time the book was sent to press (late in 1946) very little had appeared in print. However the published material is listed.

HORNUNG JULIUS LAWRENCE

Radar primer New York McGraw Hill Book Company Inc. 1948 218 p. illus. 21 cm. $3.50 1906

Contents Introduction. Fundamentals of radar. Determining distance and direction. Electronic paint picture. The basic parts of radar set. Radar at work. Long-distance navigation. Microwaves and pulses. History of radar. Bibliography. Index.

Note Peace-time applications, potential and actual, of radar are emphasized in this book. Elementary principles of radar and of related microwave techniques such as loran, sonar and television are described in non-mathematical terms. There are many illustrations of typical radar equipment. The text proper is supplemented by study questions and selected bibliography. The book is quite suitable as first book for lay readers and as text in extension courses.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY RADAR SCHOOL

Principles of radar Second edition. New York McGraw Hill Book Company Inc., 1946 870 p. illus. 23 cm. $5.50 1907

Contents Introduction. Timing circuits. Indicators. Receivers. Magnetrons. Modulators. Triode transmitters. Radio-frequency lines. Radar antennas and propagation. Wave guides and cavity resonators. Transmit-receive devices. Synchros and servomechanisms. Index.

Note This book, the work of 17 contributing authors, was first developed for use as text in the basic course given to selected Army and Navy personnel at the M. I. T Radar School during World War II. It contains comprehensive survey of radar principles and general treatment of apparatus elements, but it is not intended to instruct in the operation of particular makes or types of radar equipment. The first edition was published by The Technology Press in 1944 but was not generally offered for sale. The second edition has been extensively revised, and many chapters have been completely rewritten.

POLLARD, ERNEST CHARLES, AND JULIAN M. STURTEVANT

Microwaves and radar electronics. New York John Wiley & Sons Inc., 1948 426 p. illus. 22 cm. $5 00 1908

Contents Electromagnetic fields and microwaves. Coaxial lines, waveguides, and cavities. The production of microwaves. Microwave techniques. Pulse circuits. Cathode ray tube indicators. Tuned amplifiers. Amplification of very weak signals. Servomechanisms and computers. Miscellaneous circuits. Radar and its accessories. Microwave communications. Microwaves in physical research. Appendices: The Fourier integral. Curl and Stokes' theorem. Units. Author index. Subject index.

Note A compact treatment designed to provide upper-class physics or engineering students with an introduction to the basic principles and techniques of microwave production, control, and utilization. Although the treatment as whole is general, some of the discussions of problems that had to be solved in the application of microwaves, especially in radar are specific and rather detailed. Selected literature references are included but there are few references to the Massachusetts Institute of Technology, *Radiation Laboratory series* (see below) the source work in this field, because publication of this series had not progressed far when the

manuscript of this book was completed. However, both authors were associated with the Radiation Laboratory during World War II and have based the book on their experience there.

RIDENOUR, LOUIS NICOT editor in-chief

Radar system engineering. New York McGraw Hill Book Company Inc., 1947 748 p illus. 23 cm. (Massachusetts Institute of Technology Radiation Laboratory series Louis N Ridenour editor-in-chief Vol. 1) $7 50 1909

Contents. Foreword, by L. A. DuBridge. Introduction. The radar equation. Properties of radar targets. Limitations of pulse radar. Cw radar systems. The gathering and presentation of radar data. The employment of radar data. Radar beacons. Antennas, scanners, and stabilization. The magnetron and the pulser. R f components. The receiving system—radar receivers—indicators. Prime power supplies for radar. Examples of radar system design. Moving-target indication. Radar relay. Index.

—— Radar aids to navigation Edited by John S Hall. New York McGraw Hill Book Company Inc. 1947 389 p illus. 23 cm. (The same series Vol. 2) $5 00 1910

Contents: Foreword, by L. A. DuBridge. Part I, Introduction. Principles of radar. Nonradar navigational methods. Part II, Airborne radar: Characteristics of airborne radar. Special aids and devices. Special design considerations. Engineering and economic considerations. Part III, Ground-based radar: Types of ground-based radar and special equipment. Radar aids to air navigation and traffic control. Part IV Shipborne radar: Navigation and pilotage. A shipborne navigational radar. Index.

—— Radar beacons. Edited by Arthur Roberts New York McGraw Hill Book Company Inc. 1947 489 p illus. 23 cm. (The same series Vol. 3) $6 00 1911

Contents: Foreword, by L. A. DuBridge. Part I, Basic considerations. The uses of beacons. The requirements of systems using beacons—range considerations. Propagation and coverage considerations. Frequency considerations. Coding and communication. Traffic and engineering considerations. Part II, Beacon design. Beacon design—R-f components. Beacon receivers. Interrogation coding. Response coders. Beacons as pulse communication systems. Modulators. Beacon transmitters—magnetrons. Triode transmitters. Power supplies and performance testing. Beacon synthesis. Part III, Interrogator and system design. Radar design for beacon operation. The design of interrogator-responsors. Typical beacon systems. Part IV Beacons in the field. Installation, operation, and maintenance. Appendix. Glossary. List of symbols. Index.

—— Loran long range navigation. Edited by J A Pierce, A. A McKenzie and R. H. Woodward. New York McGraw-Hill Book Company Inc., 1948 476 p illus. 23 cm. (The same series. Vol. 4) $6 00 1912

Contents: Foreword, by L. A. DuBridge. Part I, The loran system. Introduction. History of loran. Principles of loran. Future trends. Propagation. Methods of computation of loran tables and charts. Part II, Loran equipment. Timers. Switching equipment. Transmitters. Antenna systems. Receiver-indicators. Special techniques and measurements. Appendices. The loran program in the Hydrographic Office. Loran ground stations. Demonstrations concerning the geometry of loran lines. Determination of errors in the positions of loran transmitting stations. Bibliography. Index.

—— Pulse generators. Edited by G N Glasoe and J V Lebacqz. New York Mc Graw Hill Book Company Inc., 1948 741 p. illus 23 cm. (The same series. Vol. 5) $9.00 1913

Contents: Foreword, by L. A. DuBridge. Introduction. Part I, The hard-tube pulser. The output circuit of a hard-tube pulser. Vacuum tubes as switches. Driver circuits. Particular applications. Part II, The line-type pulser. The pulse-forming network. The discharging circuit of the line-type pulser. Switches for line-type pulsers. The charging circuit of the line-type pulser. Performance of line-type pulsers. Particular applications. Part III, Pulse transformers: Elementary theory of pulse transformers. Pulse-transformer design. Effect of pulse-transformer parameters on circuit behavior. Materials and their uses in design. Appendices. Measuring techniques. Pulse duration and amplitude. List of symbols. Index.

—— Microwave magnetrons. Edited by George B Collins New York McGraw-Hill Book Company Inc. 1948 806 p illus. 23 cm. (The same series Vol. 6) $9.00. 1914

Contents. Foreword, by L. A. DuBridge. Introduction. Part I, Resonant systems: The unstrapped resonant system. The rising-sun system. The strapped system. Output circuits. Part II, Analysis of operation. The interaction of the electrons and the electromagnetic field. The space charge as a circuit element. Transient behavior. Noise. Part III, Design. Principles of design. The resonant system. The cathode. The magnetic circuit. Part IV Tuning and stabilization. Mechanical tuning. Electronic tuning. Stabilization of frequency. Part V, Practice. Construction. Measurements. Typical magnetrons. Index.

—— Klystrons and microwave triodes by Donald R. Hamilton, Julian K. Knipp and J B Horner Kuper Editorial staff George B Collins Albert G Hill and Winifred McCulloch. New York McGraw Hill Book Company Inc., 1948 533 p. illus. 23 cm. (The same series Vol. 7) $7.50 1915

Contents: Foreword, by L. A. DuBridge. Part I, Fundamentals: Introduction. Discussion of tube types and functions. Basic electronic phenomena at high frequencies. Basic circuit phenomena at high frequencies. Part II, Planar space-charge tubes: Theory of h-f space-charge devices. Space-charge devices as microwave amplifiers. Microwave triode oscillators. Pulse operation of microwave triodes. Part III, Klystrons. Velocity modulation and klystron bunching. Amplifier klystrons. Frequency multiplier klystrons and two-resonator klystron oscillators. Reflex klystron oscillators. Nonlinear reflectors. Hysteresis in reflex klystrons. Load effects in reflex klystrons. Reflex-klystron modulation. Noise in reflex klystrons. Practical reflex klystrons. Index.

—— Principles of microwave circuits Edited by C G Montgomery, R. H Dicke, and E. M Purcell. New York McGraw Hill Book Company Inc. 1948 486 p illus. 23 cm. (The same series. Vol. 8) $6 00. 1916

Contents: Foreword, by L. A. DuBridge. Introduction, by E. M. Purcell. Electromagnetic waves, by C. G. Montgomery. Waveguides as transmission lines, by C. G. Montgomery. Elements of network theory by C. G. Montgomery. General microwave circuit theorems, by R. H. Dicke. Waveguide circuit elements, by C. G. Montgomery. Resonant cavities as microwave circuit elements, by Robert Beringer. Radial transmission lines, by N. Marcuvitz. Waveguide junctions with several arms, by C. G. Montgomery and R. H. Dicke. Mode transformations, by E. M. Purcell and R. H. Dicke. Dielectrics in waveguides, by C. G. Montgomery. The symmetry of waveguide junctions, by R. H. Dicke. Index.

—— Microwave transmission circuits. Edited by George L. Ragan. New York Mc Graw-Hill Book Company Inc., 1948 725 p. illus. 23 cm. (The same series. Vol. 9) $8.50. 1917

Contents. Foreword, by L. A. DuBridge. Introduction. Elementary line theory. Materials and construction techniques. Rigid transmission lines. Flexible coupling units and lines. Transition units. Mechanical joints. Tuners, power dividers, and switches. The theory of microwave filters. The design of microwave filters. Index.

—— Technique of microwave measurements Edited by Carol G Montgomery New

York McGraw-Hill Book Company Inc. 1947 939 p illus. 23 cm. (The same series. Vol. 11) $10 00 1918

Contents: Foreword, by L. A. DuBridge. Introduction. Part I, Power generation and measurement: Power sources. Microwave power measurements. Microwave signal generators Part II, Wavelength and frequency measurements: The measurement of wavelength. Frequency measurements. The measurement of frequency spectrum and pulse shape. Part III, The measurement of impedance and standing waves: Measurements of standing waves. Impedance bridges. The measurement of dielectric constants. Part IV Attenuators and radiation measurements: Microwave attenuators—cutoff attenuators—resistive attenuators. The measurement of attenuation. Directional couplers. R-f phase and pattern measurements. Appendix: Manufacturers of microwave equipment. Manufacturers. Index.

—— Microwave duplexers. Edited by Louis D Smullin and Carol G Montgomery New York McGraw Hill Book Company Inc., 1948 437 p illus. 23 cm. (The same series. Vol. 14) $6.50 1919

Contents: Foreword, by L. A. DuBridge. Introduction. Linear theory of high-Q TR tubes. Bandpass TR tubes. Characteristics of ATR switches at low-power levels. Microwave gas discharges. The TR and ATR tubes at high power. The principles of branched duplexing circuits. Practical branched duplexers and balanced duplexers. Measurement techniques. Index.

—— Crystal rectifiers. By Henry C. Torrey and Charles A. Whitmer Edited by S A. Goudsmit, James L. Lawson, Leon B Linford, and Albert M. Stone. New York McGraw Hill Book Company Inc., 1948 443 p. illus 23 cm. (The same series. Vol. 15) $6 00 1920

Contents Foreword, by L. A. DuBridge. Introduction. Part I, General properties: Fundamental properties of the crystal rectifier Properties of semiconductors. The semiconductor—metal contact. Part II, The crystal converter: Frequency conversion. Noise generation. Loss and noise measurements. Burnout. Test equipment. Manufacturing techniques. Part III, Special types: Low-level detection. High-inverse-voltage rectifiers. Welded-contact germanium crystals. Appendices: The reciprocity theorem of Dicke. Skin effect at metal-semiconductor contact. Spreading resistance of an elliptical contact. Crystal-rectifier types and specifications. Index.

—— Microwave mixers by Robert V Pound, with a chapter by Eric Durand. Edited by C G Montgomery and D D Montgomery New York McGraw Hill Book Company Inc. *1948 381* p *illus 23* cm. (The same series Vol. 16) $5.50 1921

Contents: Foreword, by L. A. DuBridge. Introduction. Crystal rectifier units. Simple microwave crystal mixer circuits. Multiple-function mixers Local-oscillator noise. Balanced mixers. Frequency control of local oscillators. Special measurement techniques. Index.

—— Electronic instruments. Edited by Ivan A. Greenwood, Jr J Vance Holdam, Jr and Duncan Macrae Jr New York McGraw Hill Book Company Inc., 1948 721 p illus. 23 cm. (The same series. Vol. 21) $9 00 1922

Contents. Foreword, by L. A. DuBridge. Part I, Electronic analogue computers: Introduction. Computer design. Arithmetic operations. Calculus. The generation of functions Grouped operations. Examples of computer design. Part II, Instrument servomechanisms: Introduction and summary of design procedure. Servo theory—introduction and transient analysis—frequency analysis—evaluation and correction of system performance and special problems. Choice and design of components. Experimental techniques. Special servo systems. Part III, Voltage and current regulators. Regulator elements. Practical regulator design. Part IV Pulse test equipment: Development and design. Practical radar test oscilloscope designs. Part V The design and construction of electronic apparatus. Index.

—— Microwave receivers. Edited by S N Van Voorhis. New York McGraw Hill Book Company Inc., 1948 618 p illus. 23 cm. (The same series. Vol. 23) $8.00 1923

Contents: Foreword, by L. A. DuBridge. Introduction. Duplexers, microwave mixers, and local oscillators. AFC systems and circuits. I-f input circuits. VHF amplifiers, mixers, and oscillators Intermediate-frequency amplifiers. Second detectors. Video amplifiers. Gate-control circuits. Mechanical construction of receivers. R-f test equipment. *I-f test equipment. A simple radar receiver An airborne* receiver incorporating anticlutter circuits. A receiver for an automatic-tracking radar A two-band 200-Mc/sec superheterodyne receiver Wide-band F-M receiver. Beacon superheterodyne receivers. Crystal-video receivers. Superregenerative receivers. MTI receivers Index.

—— Radar scanners and radomes Edited by W M. Cady M. B Karelitz and Louis A. Turner New York McGraw Hill Book Company Inc., 1948 491 p. illus. 23 cm. (The same series Vol. 26) $7 00 1924

Contents: Foreword, by L. A. DuBridge. Part I Radar scanners: Uses of radar scanners. Ground and ship antennas. Ground antenna mounts. Stabilization of ship antennas. Ship antenna mounts. Airborne scanners. Stabilization of airborne antennas. Scanner control mechanisms. Part II, Radomes: General survey of the radome problem. Electrical design of normal-incidence radomes. Electrical design of streamlined radomes. Theory of the reflection and transmission of electromagnetic waves by dielectric materials. Radome materials and methods of fabrication. Installation and testing of radomes Appendix: Formulas for stabilization of ship antennas. Glossary Index.

Note The Radiation Laboratory of the Massachusetts Institute of Technology was organized and operated under the Office of Scientific Research and Development of the National Defense Research Committee during the World War II period as the main center in the United States of America for research into the various problems encountered in the development of radar and for the design of practical radar apparatus. Its history is recounted in some detail in J P Baxter's *Scientists against time* (see the *Index*) This series, although an official publication of the Radiation Laboratory is not a formal report of the work done there, but is a series of treatises based on this work and also on the work of scientists and engineers who worked elsewhere The material presented was selected from the standpoint of its general interest and applicability in electronics and communications rather than for military importance. Although the manner of treatment varies somewhat from volume to volume the series is, in general, intended for college-trained engineers who are engaged in the design of radar apparatus or other electronic equipment which operates on radiations of similar frequencies. For descriptions of other volumes in the series not represented above, please consult the Index to this work.

CHEMICAL ENGINEERING

CLARKE LOYAL

Manual for process engineering calculations. New York McGraw Hill Book Company Inc. 1947 438 p illus 23 cm. (Chemical engineering series) $6 00 1925

Contents Perspective. Numerical and mathematical data. Conversion tables. Physical and mechanical properties. Thermodynamic data. Piping, hydraulics, and flow measurements. Heat transfer. Combustion. Power. Pumps. Fans, blowers, and compressors. Absorption, stripping, distillation. Water Index.

Note. An engineering data book which brings together in one volume selected graphs, tables, and notes that are ordinarily found scattered through various handbooks and texts. It is intended primarily as quick source of basic scientific and technical information for engineers engaged in chemical process calculations and in the design of process plant equipment. For the benefit of readers desiring additional material most of the chapters include short list of textbooks relating to the subject discussed.

DICKEY, GEORGE D., AND CHARLES L BRYDEN

Theory and practice of filtration modern library of chemical engineering. New York Reinhold Publishing Corporation 1946 346 p illus. 24 cm. $6 00 1926

Contents. History of filtration. Theory and principles of filtration. Filtration objectives. Preparation for filtration. Filter media. Gravity filters. Pressure filters. Vacuum filters. Hydraulic presses and squeeze presses. Laboratory filters. Oil filters, oil expellers and oil separators Water filtration. Sewage clarification and sewage sludge dewatering. Centrifugals and centrifuges. Air gas and light filters. Auxiliary equipment. Typical filter applications and flow sheets. Testing and selection of equipment. Installation and operation. Appendices: Surface and interfacial tension separation of immiscible fluids. Terms, tables and chart. Index

Note Although the techniques of removing solids from gases are mentioned, the main subject of this work is the separation of solids from liquids by the use of porous media. The first quarter of the book is an introduction to and foundation for the remainder which covers in detail the various types of filters, their structural and operating characteristics, and their applications. Many illustrations of filtering equipment are included and few references are given to related books and periodicals. In spite of the fact that the subject and the authors' approach to it are essentially the same as in their *A textbook of filtration* 1931 this is an entirely new work. It is designed for technologists in the chemical and metallurgical process industries and in the field of sanitary engineering.

HESSE, HERMAN CARL AND J HENRY RUSHTON

Process equipment design. New York D Van Nostrand Company Inc., 1945 580 p illus 24 cm. $7.50 1927

Contents: Materials of construction. Mechanical properties and strength of materials. Riveted pressure vessels. Welded pressure vessels. Mechanics. Threaded fasteners and combined stresses Structural analysis. Trusses and truss adaptation. Piping Attachments and closures. Non-ferrous construction. Concrete construction. Wood and other non-metallic construction. Belt and chain drives Toothed gearing. Shafting and bearings. Handling equipment and mechanical frames. Special stress applications. References Index

Note This book is intended for use as textbook in senior engineering classes and as reference manual in industry. Emphasis has been placed mainly on those fundamental principles of mechanics that underlie designing in general, rather than on the design of particular equipment, although equipment used in the chemical industries is emphasized, and the subject of pressure vessels is dealt with at some length. A useful feature of the book is the constant reference to American Society of Mechanical Engineers and other safety codes governing construction today Review problems are listed at the end of each chapter and the two-and-half pages of references are keyed to the text. One of the authors is practicing industrial chemical engineer the other Professor of Chemical Engineering at the University of Virginia.

HOUGEN OLAF ANDREAS, AND KENNETH M WATSON

Chemical process principles. A combined volume consisting of Part one, Material and energy balances. Part two Thermodynamics. Part three Kinetics and catalysis. New York John Wiley & Sons, Inc., 1943–47 1107 p. illus. 23 cm. $12 50 1928

Contents: Part I, Material and energy balances: Stoichiometric principles. Behavior of ideal gases. Vapor pressures Humidity and saturation. Solubility and sorption. Material balances. Thermophysics. Thermochemistry Fuels and combustion. Chemical, metallurgical, and petroleum processes. Part II, Thermodynamics: Thermodynamic principles. Thermodynamic properties of fluids. Expansion and compression of fluids. Thermodynamics of solutions. Physical equilibrium. Chemical equilibrium. Thermodynamic properties from molecular structure. Part III, Kinetics and catalysis: Homogeneous reactions. Catalytic reactions. Mass and heat transfer in catalytic beds. Catalytic reactor design. Uncatalyzed heterogeneous reactions. Appendix. Author index. Subject index.

Note. (1875) An advanced work whose purpose is "to give intensive quantitative training in the practical applications of the principles of physical chemistry to the solution of complicated industrial problems and in methods of predicting missing physicochemical data from generalized principles. It is used chiefly as textbook in undergraduate and graduate courses in engineering schools. The book developed out of the same authors' *Industrial chemical calculations*, second edition, New York John Wiley & Sons, 1936. However it provides more complete treatment than the earlier work. The parts are available separately as follows: Part I, 1943 452 p., $3.00; Part II, 1947 345 p., $3 00; Part III, 1947 303 p $4.50.

KIRKBRIDE CHALMER GATLIN

Chemical engineering fundamentals. New York McGraw Hill Book Company, Inc., 1947 419 p illus. 24 cm. (McGraw Hill chemical engineering series) $5 00 1929

Contents: Introduction. Human relations in chemical engineering. Useful mathematical tools. Important concepts of physics and chemistry The material balance. The energy balance. Static equilibria. Dynamic equilibria. The economic balance. Presentation of technical results. Appendix. Index

Note Unlike the usual introductory textbook in chemical engineering, which deals chiefly with the technology this book by including such subject matter as how to get along with the boss, how to express one's thoughts clearly and how to make technical reports, is intended to give the student broad view of the work of chemical engineers in industry Technical fundamentals, also, are presented somewhat unconventionally Although the work will be used mainly in college courses, it should be helpful also to those who desire reliable vocational insight into the profession of chemical engineering.

KOBE KENNETH ALBERT

Inorganic process industries New York The Macmillan Company 1948 371 p. illus. 24 cm. $6 00 1930

Contents: The chemical Fixation. The natural sodium salts industries. The natural potassium salts industries. The sodium carbonate industry. The electrolytic caustic-chlorine industries. The chamber sulfuric acid industry. The contact sulfuric acid industry. The nitrogen fixation industries. The nitrogen products industries. The phosphorus products industries. Appendix. Index.

Note. This new text on industrial chemistry covers fewer industries than are covered in well-known books already published in the same field. The advantage of a less-inclusive book in short courses in colleges is obvious. The emphasis placed on chemical literature and on good procedures in making literature searches is commendable. From the viewpoint of library reader the book offers later statistical information on the industries that are covered, bibliographies that are more up to date, and somewhat more concise descriptions of processes. The author is Professor of Chemical Engineering at the University of Texas.

KOWALKE, OTTO LOUIS

Fundamentals in chemical process calculations New York The Macmillan Company 1947 158 p illus. 22 cm. $3 00 1931

Contents: Temperature scales. Density and specific gravity. Pressure and its measurement. Molal units. Methods of expressing compositions of mixtures and solutions. Pressure-volume-temperature relations for gases. Partial pressures of gases and vapors. Material accounts. Salts crystallized from water solutions. Silicates and slags. Combustion calculations for fuels. Heat losses in products of combustion. Appendix. Tables of data. Index.

Note. The discussions and problems in this book are designed to acquaint second year chemical engineering students with the types of calculations encountered in industrial chemical operations. The range of topics is admittedly limited, and the problems are largely arithmetical; but they are by no means elementary. The author is Professor of Engineering at the University of Wisconsin.

SHREVE, RANDOLPH NORRIS

The chemical process industries. New York McGraw Hill Book Company Inc., 1945 957 p illus 23 cm. (McGraw Hill chemical engineering series) $8 00 1932

Contents (abridged) Unit processes and unit operations. Water conditioning and waste-water treatment. The destructive distillation of coal. Fuel gases. Industrial gases. Industrial carbon. The ceramic industries. Cements, calcium and magnesium compounds. Potassium salts and mixed fertilizers. Salt and miscellaneous sodium compounds. Electrolytic industries. Electrothermal industries. Sulfur and sulfuric acid. Nitrogen industries. Explosives, pyrotechnics, and chemical warfare. The photographic industry. Paint, varnish, lacquer and allied industries. Leather, gelatine, and glue. Perfume and flavoring industries. Oils, fats, waxes. Soap and other surface-active agents. Sugar and starch industries. Fermentation industries. Wood chemicals. Synthetic fibers. Natural and synthetic rubber. The petroleum industry. Intermediates, dyes, and their applications. Author index. Subject index.

Note. An encyclopedic manual of industrial chemical processes described from the viewpoint of chemical engineering. A typical chapter opens with an outline of the historical development of the particular industry, then concise surveys of economics, raw materials, and currently used manufacturing processes follow. Flow sheets that appeared originally in *Chemical and metallurgical engineering* are used liberally. Related literature is generously cited. The work is designed primarily as a text for use in engineering colleges, and it has value also as a reference handbook for professional and library use.

SPRING, HARRY MORTIMER

Pressure vessels for industry construction design inspection and safety practices with the important pressure vessels of many industries. New York McGraw Hill Book Company Inc., 1947 259 p illus. 21 cm. $3 75 1933

Contents. Compressed-air systems. Pressure vessels for steam and hot-water services. Pressure vessels for pulp and paper mills. Pressure vessels for the rubber industry. Pressure vessels for the textile industry. Pressure vessels for the chemical industry. Pressure vessels for specialized services. Design—pressure and stress calculations. Construction and fabrication practices. Appliances for pressure vessels. Defects—their hazard, prevention, and repair. Appendix. Index.

Note: The chief pressure vessel used in industry is the steam boiler. Mr Spring has already written about boilers in his *Boiler operator's guide*, New York McGraw-Hill, 1940. The scope of this new work is the great variety of pressure vessels other than boilers. These include compressed air tanks, feed-water evaporators, steam accumulators, hot water tanks, wood pulp digesters, storage tanks for certain petroleum products, chemical processing equipment, refrigerating systems, and parts of machines, such as the dryer rolls on paper-making machines, in which steam or another fluid is utilized under pressure. Frequent references are made to the A. S. M. E. *Code for unfired pressure vessels*; state regulations concerning these vessels are summarized in an appendix.

TYLER, CHAPLIN

Chemical engineering economics. Third edition. New York McGraw Hill Book Company Inc. 1948 321 p illus 23 cm. (McGraw Hill chemical engineering series) $4.00 1934

Contents: Characteristics of the chemical and allied industries. Research and development. Plant location. Plant design. Operative investment. Process equipment costs. Economic balance. Heat and power. Plant operation and control. Cost accounting. Market development and research. Marketing. Organization. Management. Patents. Index.

Note: A standard outline of the business and economic phases of the chemical industry. It is designed for senior engineering students and also for chemical engineers and non-technical executives already employed in industry. Compared to the second edition (1938) the present edition has been almost completely rewritten, and more attention is paid to marketing and management. The book is about eighty pages longer, and there are fourteen additional contributors of chapters and parts of chapters.

APPLIED CHEMISTRY

GENERAL

BENNETT, HARRY editor in-chief

The chemical formulary a collection of valuable timely practical commercial formulae and recipes for making thousands of products in many fields of industry Volumes VII VIII. Brooklyn N Y Chemical Publishing Co Inc. 1945–48 22 cm. Vol. VII, $7.00 Vol. VIII $7 00 1935

Contents (*abridged*) Preface to Volume VIII. Adhesives. Cosmetics. Drug products. Emulsions and dispersions. Farm and garden preparations. Food products. Ink and allied products. Insecticides, fungicides and weed killers. Leather treating preparations. Lubricants and oils. Construction materials. Metals and their treatment. Paint, varnish, lacquer and other coatings. Paper. Photography. Plastics, rubber resins and waxes. Polishes. Pyrotechnics and explosives. Soaps and cleaners. Textiles. Miscellaneous. Tables. Trade name chemicals. Chemicals and supplies—where to buy them. Sellers of chemicals and supplies. Index.

Note (1339) A well known compilation of useful recipes and formulae. Although there is little variation in the table of contents of one volume compared to another each volume is actually a fresh collection of material that supplements the preceding volumes in the series.

BENNETT HARRY

Chemical specialties a symposium. Brooklyn N Y Chemical Publishing Co Inc. 1946 824 p illus 22 cm. $12 50 1936

Contents: Compounding chemistry Classes of chemicals, their chemical properties, reactions, and uses. Chemicals classified by use. Raw materials Processing procedure and equipment. Formulary Marketing. General business principles Records and forms. Technical help Laws and regulations Appendix. Common hazardous chemicals. First aid for chemical injuries. Abbreviations. Common and chemical names. Tables. Where to buy—chemicals and supplies—new equipment and supplies. Index

Note. The purpose of this practical book is to guide persons who are planning to start chemical specialties business. T the business man it offers the elements of chemistry and to the chemist it gives the basic principles of business Approximately the first half of the volume is devoted to instructions for making adhesives, cosmetics, emulsions, food products, inks, greases, paints, polishes, waxes, etc. In the last half, the reader is told how to establish the business, sell its products, and keep the records.

BENNETT HARRY

Practical emulsions Second completely revised edition. Brooklyn, N Y Chemical Publishing Co Inc., 1947 568 p illus 22 cm. $8.50 1937

Contents Types of emulsions. Emulsifying agents Foams and frothing. Methods, formulation, equipment. Stability General technical emulsions. Dispersing agents and wetting agents. List of emulsifying agents *List of emulsions*. List of demulsifying and defoaming agents. Papers on emulsifying agents. Papers on emulsions. Agricultural spray emulsions. Cutting oils, "soluble" oils, miscible oils. Emulsifying agents. Bituminous emulsions Cleaners and soaps Cosmetic and drug emulsions. Delustering agents Food emulsions. Gasoline emulsions Lacquer emulsions. Leather ointment emulsions. Lubricant emulsions. Medicinal emulsions. Paint emulsions. Paper processing emulsions. Polish emulsions. Resin and rubber emulsions Textile emulsions. Waterproofing emulsions. Wax emulsions. Miscellaneous. Dispersions. Index.

Note (1340a) As in the first edition, this book is intended to serve as manual for technicians and manufacturers concerned with the preparation and use f emulsions rather than as source of information on theoretical aspects. I this edition some new formulae have been added, and fatty acids of polyhydric alcohols are now covered. Thirteen short papers that deal with the utilization of emulsifiers and em lsions in the manufacture of soaps, dyes, foods, leather cosmetics, etc. have been added.

ENCYCLOPEDIA OF CHEMICAL TECHNOLOGY

Edited by Raymond E. Kirk and Donald F Othmer Volume I A to Anthrimides. Volume II Anthrone to carbon-arc. New York The Interscience Encyclopedia, Inc., 1947–48 2 v illus 27 cm. $20 00 each. 1938

Note In scope, this work is broadly similar to the well-known Thorpe, *Dictionary f applied hemistry* There are many differences, but the most important one is the emphasis here on American chemical engineering practice with mention of foreign methods only in cases where the foreign method appears to offer certain advantages over the American. The two chief editors are heads respectively of the Department of Chemistry and the Department of Chemical Engineering, Polytechnic Institute of Brooklyn, N. Y but most of the contributors—to Volumes & II, at least—are connected with American industry The articles range in length from short definitions of terms to long encyclopedic articles. Usually but not invariably uses of chemicals are not described in the articles on methods and product processes but are covered in special articles of which typical ones in Volume deal with abrasives, adhesives, and alloys. The articles, except the very short ones, are signed and are accompanied by selected but rather extensive reference lists hich include citations to patents. The work is scheduled for completion in ten volumes.

FRIER WILLIAM T, AND ALBERT C HOLLER

Introduction to industrial chemistry New York McGraw Hill Book Company Inc., 1945 368 p illus 20 cm. $3 50 1939

Contents: Atoms. Molecules and valence. Plus and minus valence. Radicals Acids. Acids, bases, and salts. Energy relations in chemical reactions. Reduction and oxidation. Production of iron and steel Slags. High temperature chemistry Aluminum. Magnesium. Other applications of electrochemistry The manufacture of chemicals. Silicates, glass, and colloids. Ceramics and cement. Industrial water Fuels and combustion. Organic chemistry (theory) Plastics. Rubber. The refining of petroleum. Appendix. Index.

Note A readable book designed to appeal to persons taking courses in industrial night schools and to general readers. The expositions of selected basic chemical principles are brief and clear. About three-fourths f the book is devoted to descriptions from the chemical viewpoint of certain important industries.

HAYNES WILLIAMS

American chemical industry the World War I period 1912–1922 New York D Van Nostrand Company Inc., 1945 2 v illus. 25 cm. Complete set, $60 00 1940

Content (*abridged*) Volume Part I, Setting of World War period The Wilsonian background. Trending towards war Gearing industry to war Part II, Critical raw materials: Nitrates from Chile. Nitrogen from the air The government nitrogen plants. The by-products from coal. Potash from anything and everywhere. Phosphate rock and elemental phosphorus Pyrites to brimstone. Gulf Coast sulfur Critical metals. Crude drugs. Appendix. Book titles. Company and personal name index. Subject index. Volume II: Part I, Industrial chemicals Ash, caustic, and bleach. Sulfuric acid. Alums to silicates. Pigments and colors. Insecticides and fungicides. Alcohol—beverage and chemical. New solvents Industrial gases Fertilizers. Part II, The coal tar chemicals: Foundations of new industry The

dye crisis. Dye licenses, patents, and tariff. Part III, The fine chemicals: Medicinal chemicals. Coal-tar medicinals. Aromatics—natural and synthetic. Part IV Chemical evolution. Chemicalization of industry. Synthetic beginnings. Chemistry in industry. The effects of the war. Appendix. Book titles. Company and personal name index. Subject index.

Note: The first two volumes published of a comprehensive history that will be complete in six volumes. These volumes are based not only on published information but also first-hand information gained from men who took part in the events described. The author's style is vigorous and readable, and the text is carefully documented. The appendix of each volume includes copious statistical data on prices, productions, imports, and tariffs. Also included are such reference material as portraits of leading figures, reprints of documents that affected the industry and extensive bibliographical references.

SUTHEIM GEORGE M

Introduction to emulsions. Brooklyn N Y Chemical Publishing Co., Inc., 1946 260 p illus. 22 cm. $4 75 1941

Contents: Theoretical foundation. The physical chemistry of emulsifying agents. The chemistry of the emulsifying agents. The formation of emulsions. The properties of emulsions. The applications of emulsions. Appendix. Glossary. List of emulsifying agents. Bibliography. Index.

Note: The material in this book had its beginning in a series of lectures presented at the Brooklyn Polytechnic Institute. The original lectures have been expanded, but the clear informal style remains in the author's discussions here of the principles, properties, methods of preparation, and practical uses of emulsions in paints, adhesives, foods, leathers, cosmetics, etc. The list of emulsifying agents in the appendix gives the trade name, chemical name, type, and manufacturer of some one hundred and eighty emulsifying agents. Essentially the book is a concise survey of emulsions useful chiefly to chemists and manufacturers.

UNITED STATES OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT

Chemistry a history of the chemistry components of the National Defense Research Committee, 1940–1946 Edited by W A. Noyes, Jr., with foreword by James Bryant Conant and Roger Adams. Boston Little, Brown and Company, 1948 524 p illus 22 cm. (Science in World War II) $6.00. 1942

Contents (abridged): Part One, Introduction. The organization of the National Defense Research Committee—general plan. Part Two, History of Division 8. The history of Division 8 central laboratories. Synthetic work on explosives. Research on detonation and shock waves. Evaluation of explosives and munitions. Molded composite propellants. Tracers and igniters. Part Three, History of Division 9. The organization of Division 9. Protective clothing and ointments. The detection, identification, and analysis of chemical warfare agents. The toxicity and vesicancy of chemical warfare agents. Part Four, History of Division 10. The filtration of aerosols. Screening smokes. Gas mask absorbents and related problems. Insecticide dispersal. Part Five, History of Division 11. The oxygen program. Incendiary bombs. History of NDRC flame-thrower development. Part Six, History of Division 19. Weapons for sabotage. Part Seven, History of Tropical Deterioration Committee. The study of tropical deterioration. Appendices. Indices.

Note: A comprehensive review of the history, organization, and work of the thousands of chemists who were mobilized through the National Defense Research Committee in connection with the United States effort in World War II. The book is written for chemists and other specialists rather than for laymen and is packed with both historical and technical information concerning the development of the widely diversified items indicated in the table of contents. The mechanics of committee and group organization are discussed in detail, and credit is given to individuals and commercial firms responsible for the success of specific projects. The series (see Index), of which this book is a part, constitutes an official record of the activities and accomplishments of the Office of Scientific Research and Development.

WEINGART, GEORGE WASHINGTON

Pyrotechnics. Second edition revised and enlarged. Brooklyn, N Y Chemical Publishing Co Inc., 1947 244 p illus. (part col'd) 22 cm. $7 00 1943

Contents: Part I Ingredients. Part II Manipulation. Part III Products of manufacture and formulas. Part IV Exhibition fireworks. Part V Miscellaneous. Glossary. List of books on pyrotechny. Index.

Note (1943) A manual of practical instructions for the small fireworks manufacturer. The greater part of the book consists of formulas and manufacturing directions for making such typical pieces of fireworks as: matches, fuses, bombshells, balloons, firecrackers, cannoncrackers, mines, torpedoes, pinwheels, Roman candles, and skyrockets. This edition contains new formulas for making stars, comets, smoke shells, and smoke grenades. An index has been added.

YOUNG CLARENCE BERNARD FEHRLER, AND K. W COONS

Surface active agents theoretical aspects and applications. Brooklyn N Y Chemical Publishing Co Inc. 1945 381 p illus. 22 cm. $6.00 1944

Contents: Part I: Theory of surface tension. Determination of surface tension. The structure of wetting agents and specific surface-tension agents. Part II: Emulsions. Plating, metal cleaning, pickling and etching. Cosmetics. Leather. Flotation. Inks. Textiles. Cutting oils. Adhesives. Foods. Lubrication. Soldering, brazing, and welding.

Note: Wetting agents and related compounds that affect the surface tension of liquids form the subject of this volume. About one-third of the work is devoted to discussions of theoretical aspects, while the remainder is concerned with various commercial uses. Extensive lists of references, including patents, are appended to the chapters. Another useful feature is a thirty-five page tabulation of surface-active agents that, arranged by trade-name, gives chemical compositions, industrial uses, and manufacturers' names. The book is directed principally at research and control chemists in the process industries.

PLASTICS

BROWN DEREK WARBURTON AND WILBUR T HARRIS

An introduction to engineering plastics. New York Murray Hill Books Inc., 1947 274 p illus 23 cm. $4.00 1945

Contents: Introduction to plastics. Materials and manufacture. Physical properties of plastics. Future of phenolic plastics. Groups of plastics. Tests and specifications. Plastics for gears. Plastics for bearings. Transparent plastic models. X-ray examination of plastics. Metal coating of plastics. Machining of plastics. Laminates. Wood laminates. Synthetic adhesives. High-frequency heating. Fillers. Molds and mold design. Plant and equipment. Welding plastics. Appendix. Index.

Note: A description of plastic materials and the methods of working them. The book is intended for manufacturers, engineers, and designers who are not specialists in plastics technology but who are interested in the utilization of plastics for industrial purposes. A useful feature of the volume is the tabulation of physical properties for approximately twenty-eight plastic materials. The appendix lists trade names, manufacturers, and uses.

D ALELIO GAETANO FRANCIS

Experimental plastics and synthetic resins. New York John Wiley & Sons, Inc., 1946 185 p. illus. 27 cm. $3.50 1946

Contents (abridged): Phenol for resin preparations. Formaldehyde determinations. Preparation and purification of a diphenylol alkane. Preparation of a phenol formaldehyde casting resin. Preparation of a phenol-formaldehyde spirit-soluble laminating varnish. Preparation of acid-catalyzed phenol-formaldehyde molding resins. Preparation of a phenolic molding powder. Preparation of substituted phenols. Preparation of methylol derivatives of urea. Preparation of molding powders of the urea and melamine type. Preparation of a urea-formaldehyde butyl alcohol resin for varnishes. Relationship of alkyd resins to the structure of reactants. Preparation of a series of alkyd resins for coatings. Preparation of diethylene glycol maleate. Polymerization of styrene. Preparation of methacrylic ester. Polymerization of a methacrylic ester. Cross-linked methacrylate polymers. Effect of inhibitors. Preparation of a polyvinyl alcohol. Preparation

APPLIED CHEMISTRY

GENERAL

BENNETT, HARRY editor in-chief

The chemical formulary a collection of valuable, timely practical commercial formulae and recipes for making thousands of products in many fields of industry Volumes VII, VIII. Brooklyn, N Y Chemical Publishing Co Inc. 1945–48 22 cm. Vol. VII, $7 00 Vol. VIII $7 00 1935

Contents (abridged) Preface to Volume VIII. Adhesives. Cosmetics. Drug products. Emulsions and dispersions. Farm and garden preparations. Food products. Ink and allied products. Insecticides, fungicides and weed killers. Leather treating preparations. Lubricants and oils Construction materials. Metals and their treatment. Paint, varnish, lacquer and other coatings. Paper Photography Plastics, rubber resins and waxes Polishes. Pyrotechnics and explosives. Soaps and cleaners. Textiles. Miscellaneous. Tables Trade name chemicals. Chemicals and supplies—where to buy them. Sellers of chemicals and supplies. Index.

Note (1889) A well-known compilation of useful recipes and formulas. Although there is little variation in the table of contents of one volume compared to another each volume is actually fresh collection of material that supplements the preceding volumes in the series.

BENNETT HARRY

Chemical specialties, a symposium. Brooklyn N Y Chemical Publishing Co Inc. 1946 824 p illus. 22 cm. $12 50 1936

Contents: Compounding chemistry Classes of chemicals, their chemical properties, reactions, and uses. Chemicals classified by use. Raw materials. Processing procedure and equipment Formulary Marketing. General business principles Records and forms. Technical help. Laws and regulations Appendix Common hazardous chemicals. First aid for chemical injuries. Abbreviations. Common and chemical names. Tables. Where to buy—chemicals and supplies—new equipment and supplies Index

Note. The purpose of this practical book is to guide persons who are planning to start chemical specialties business. T the business man it offers the elements of chemistry and to the chemist it gives the basic principles of business Approximately the first half of the volume is devoted to instructions for making adhesives, cosmetics, emulsions, food products, inks, greases, paints, polishes, waxes, etc. I the last half, the reader is told how to establish the business, sell its products, and keep the records

BENNETT HARRY

Practical emulsions Second, completely revised edition. Brooklyn N Y Chemical Publishing Co., Inc. 1947 568 p illus 22 cm. $8 50 1937

Contents Types of emulsions. Emulsifying agents Foams and frothing. Methods, formulation, equipment. Stability General technical emulsions. Dispersing agents and wetting agents List of emulsifying agents List of emulsions List of demulsifying and defoaming agents. Papers on emulsifying agents. Papers on emulsions Agricultural spray emulsions. Cutting oils, "soluble" oils, miscible oils. Emulsifying agents. Bituminous emulsions. Cleaners and soaps. Cosmetic and drug emulsions. Defoaming agents Food emulsions. Gumbase emulsions. Lacquer emulsions Leather treatment emulsions. Lubricant emulsions Medicinal emulsions Paint emulsions. Paper processing emulsions Polish emulsions Resin and rubber emulsions. Textile emulsions Waterproofing emulsions. Wax emulsions. Miscellaneous. Dispersions. Index

Note (1890a) As in the first edition, this book is intended to serve as manual for technicians and manufacturers concerned with the preparation and use of emulsions rather than as source of information on theoretical aspects. In this edition some new formulas have been added, and fatty acids of polyhydric alcohols are now covered. Thirteen short papers that deal with the utilization of emulsifiers and emulsions in the manufacture of soaps, dyes, foods, leather cosmetics, etc. have been added.

ENCYCLOPEDIA OF CHEMICAL TECHNOLOGY

Edited by Raymond E. Kirk and Donald F Othmer Volume I A to Anthrimides. Volume II Anthrone to carbon-arc. New York The Interscience Encyclopedia, Inc. 1947–48. 2 v illus 27 cm. $20 00 each. 1938

Note In scope this work is broadly similar to the well-known Thorpe, *Dictionary of applied chemistry* There are many differences, but the most important one is the emphasis here on American chemical engineering practice with mention of foreign methods only in cases where the foreign method appears to offer certain advantages over the American. The two chief editors are heads, respectively of the Department of Chemistry and the Department of Chemical Engineering, Polytechnic Institute of Brooklyn, N Y.; but most of the contributors—to Volumes I & II, at least—are connected with American industry The articles range in length from short definitions of terms to long encyclopedic articles. Usually but not invariably uses of chemicals are not described in the articles on methods and product processes but are covered in special articles of which typical ones in Volume I deal with abrasives, adhesives, and alloys. The articles, except the very short ones, are signed and are accompanied by selected but rather extensive reference lists which include citations to patents. The work is scheduled for completion in ten volumes.

FRIER WILLIAM T AND ALBERT C HOLLER

Introduction to industrial chemistry New York McGraw Hill Book Company Inc. 1945 368 p illus 20 cm. $3.50. 1939

Contents. Atoms. Molecules and valence. Plus and minus valence Radicals. Acids. Acids, bases, and salts. Energy relations in chemical reactions Reduction and oxidation. Production of iron and steel. Other Slags High-temperature chemistry Aluminum. Magnesium. Other applications of electrochemistry The manufacture of chemicals Industrial water. Silicates, glass, and colloids Ceramics and cement. Plastics. Rubber. Fuels and combustion. Organic chemistry (theory) The refining of petroleum Appendix. Index.

Note A readable book designed to appeal to persons taking courses in industrial night schools and to general readers. The expositions of selected basic chemical principles are brief and clear. About three-fourths of the book is devoted to descriptions from the chemical viewpoint of certain important industries.

HAYNES WILLIAMS

American chemical industry the World War I period 1912–1922 New York D Van Nostrand Company Inc. 1945 2 v illus. 15 cm. Complete set, $60 00 1940

Contents (abridged) Volume Part I, Setting of World War period The Wilsonian background. Trending towards war Converting industry to war Part II, Critical raw materials: Nitrates from Chile. The fixation of nitrogen from the air The government nitrogen plants. Phosphate products from coal. Potash from anything and everywhere. Gulf Coast rock and elemental phosphorus. Pyrites to brimstone. Crude sulfur Critical metals. Crude drugs. Appendix Book titles. Company and personal name index. Subject index. Volume III Part I, Industrial chemicals: Ash caustic, and bleach. Sulfuric acid. Alcohol to alkalies. Pigments and colors Insecticides and fungicides Fertilizers —beverage and chemical. New solvents. Industrial gases. The new industry. Part II, The coal tar chemicals: Foundations of new industry.

for 1942–1946 With the collaboration of P M. Doty V J Frilette and B H. Zimm. Volume I. New York Interscience Publishers, Inc., 1948 632 p illus 25 cm. $6 00 1953

Contents (abridged) Properties and evaluation of plastics: Tensile and impact strength. Elastic behavior Plasticity and flow Wearing qualities. Electrical properties. Permeability and sorption. Physical chemistry of polymer systems: The solid state. Solutions—fundamental theory—molecular weight—viscosity—osmotic pressure—light-scattering. Kinetics of polymerization reactions: Copolymerization theory Three-dimensional polymers and gelation. Plastics engineering: Solvents and plasticizers. Laminates. Radio-frequency heating. Author index. Subject index.

Note: A collection of abstracts which originally appeared in the *Ruder rubber plastics* abstracting service of the same publisher The abstracts cover mainly the more important technical articles, are unusually detailed in comparison with other published abstracts, and frequently reproduce diagrams of apparatus and tabular data. The present volume deals with physical and chemical properties of plastics in general, and the second volume of the work will cover material on specific kinds of plastics.

MASON JOHN PHILIP AND JOSEPH F MANNINO

The technology of plastics and resins. New York D Van Nostrand Company Inc., 1945 493 p illus. 24 cm. $6.50. 1954

Contents (abridged) Section one, Macromolecules and their properties: The monomer state. The plastic state. Polymerization. Plastic properties and their relation to chemical structure. Section two, Plastic types: Use of resins in industry Natural products—rubber and cellulose. Synthetic plastics—thermosetting phenolics, amino aldehyde resins, cellulose derivatives, acrylic resins, polystyrene, vinyl family alkyd resins, the protein plastics, synthetic rubbers. Section three, Fabrication Compounding. Molding. Design of molds. Casting. Laminating. Coatings. Appendix II Silicone resins. Index.

Note: A college textbook primarily for undergraduates who have completed courses in general and organic chemistry The treatment is comprehensive and includes the chemical theory preparation, and properties of plastics materials, their applications, and the manufacturing of plastics articles. In view of its wide scope, the book will be useful to men entering the plastics industry as well as to college students. Review questions are included, and there are selected footnote references to the related literature.

MODERN PLASTICS ENCYCLOPEDIA, 1948 New York Plastics Catalogue Corporation, 1948 1673 p illus (part col'd) 30 cm. U.S., $5.00 Canada, $6.00 foreign countries $7.00 1955

Contents: Your product in plastics. Materials. Coatings. Film and sheeting. Synthetic fibers and fabrics. Laminates and resin-wood products. Technical data. Engineering design. Molding, extruding and casting. Fabricating, finishing and assembly Machinery and equipment. Stock molds. Appendix and directory Charts Index.

Note. This volume is basically a directory of plastic manufacturers, and a compilation of their catalogues. Interspersed among the advertising matter, however, is a considerable body of up-to-date and authoritative technical information regarding the manufacture, properties, and uses of plastic materials New manufacturing processes and equipment are described together with extensive tabulations of technical data and current bibliographies. Charts are included which tabulate technical data regarding plastics, plasticizers, solvents, adhesives, coatings, fibers, synthetic rubbers, laminates, and plastic films. The volume had its origin in 1934 as an enlarged issue of the periodical *Modern plastics*. Since 1941 it has been published annually in its present form. A new edition was scheduled for publication in 1949

NAUTH RAYMOND

The chemistry and technology of plastics. New York Reinhold Publishing Corporation, 1947 522 p illus. 23 cm. $9.50 1956

Contents. Section I. Thermosetting resins: Introduction and history of the plastics. Thermosetting plastics. Amino resins Thermosetting cast resins. Amino-aldehyde resins. The urea resins. Laminates. Section II, Thermoplastic resins: Vinyl polymers and copolymers. Acrylic, polyamide, organic silicon and polystyrene resins. Section III, Cellulose plastics: The cellulose plastics. Regenerated cellulose. Section IV Synthetic rubber natural resins and plywood: Synthetic rubber rubber-like plastics and copolymers. Protein plastics and natural resins. Resin-bonded plywood and veneer. Section V Mold design and equipment. Mold design, presses and equipment. Appendix and glossary Index

Note: In this well-written book the chemistry of plastics materials is reviewed and the techniques of plastics fabrication are thoroughly discussed. The book is aimed at the product designer small manufacturer and interested layman rather than at the plastics chemist. The volume is well illustrated with diagrams, drawings, and photographs of plastics equipment, processes, and products. Related patents as well as references for additional reading are cited.

RICHARDSON, HENRY MARTYN, AND J WATSON WILSON, editors

Fundamentals of plastics. New York Mc Graw Hill Book Company Inc., 1946 483 p. illus 23 cm. $5.00 1957

Contents (abridged) Chemical structure of synthetic resins. Materials of construction based on synthetic resins. Forming and fabrication of plastic articles. Properties and application of plastics. Thermosetting resinous condensation products. Thermoplastic cellulosic plastics. Vinyl polymers and related resins. Rubber and the synthetic elastomers. Polyesters and polyamides. Cross-linked addition polymers. Silicone resins, rubbers, and related products. Plastics product design. Molds for plastics. Resin-bonded and laminated assemblies. Compression and transfer molding. Injection molding and extrusion. Testing methods. Control of quality and uniformity Index.

Note. Each chapter has been prepared by one or more experts in some particular branch of plastics chemistry or technology The book, an outgrowth of a course in plastics under the auspices of the Engineering, Science, and Management War Training Program, is intended to provide a survey of the chemistry and manufacture of plastic materials which are based on synthetic organic resins. It is intended mainly for persons entering the industry and others with practical interests in the subject. The chapter on plastics product design is reprinted from the book, *Plastics mold engineering*, New York McGraw-Hill, 1944, by J. H. DuBois. Bibliographies are given at the end of some chapters.

SACHS CARROL C., AND EUGENE H. SNYDER

Plastics mold design. New York Murray Hill Books, Inc., 1947 77 p. illus. 31 cm. Spiral binding $4.50 1958

Contents (abridged) Introduction, by Fred B. Stanley Part One, Drafting-room practice: Part-design considerations Mold-design procedure. Materials for mold construction: High production—selection of mold steel—chromium-plating plastic molds. Limited production. Materials and techniques. Part Two, Compression mold design The principle of compression molding. Types of compression mold. Transfer-mold design The principle of transfer molding. Types of transfer mold. The part drawing. Detailed discussion of the mold. Detailed assembly drawing. Injection-mold design: The principle of injection molding. Types of injection mold. Detailed discussion of the mold. Extrusion-die design The extrusion process. Detailed drawings and discussion of die. General discussion of extruded shapes. Index.

Note: A concise introductory text for men who make, or who are learning to make, dies for plastics articles. Design of the articles themselves is not covered. The discussions of die-making operations are detailed and specific. A useful feature for the beginner is the inclusion of eight sheets of large-scale working drawings which show the construction of typical plastics molds.

SASSO JOHN

Plastics handbook for product engineers. New York McGraw Hill Book Company Inc., 1946. 468 p. illus. 23 cm. $6 00 1959

Contents: Part I Plastic materials: Chemistry of plastics. Materials and properties. Processing. Machining and finishing plastic parts. Recent developments and techniques. Part II, Design of plastic products: Fundamental design considerations. Design details. Common faults, causes, and remedies in molded plastic parts. Part III, Rubberlike materials—chemistry and application Synthetic rubberlike materials. Synthetic rubbers in engineering design. Butyl rubber. Butadiene-acrylonitrile rubbers. GR-S synthetic elastomers. Neoprene rubber. Thiokol polysulfide synthetic rubbers. Appendixes: Bibliography of plastics. Reference catalogs on plastics. Index.

Note: In this volume the author has consolidated a large amount of information regarding the properties and uses of plastic materials

that will be of value to engineers concerned with the selection, design, and processing of plastic goods. Much of the material has appeared previously in *Product engineering* and chapters four and eight are reprinted from the author's earlier work, *Plastics for industrial use*, New York McGraw-Hill, 1942. However in addition to this reprinted material the author discusses the latest techniques and developments in processing, fabrication, and design. A useful list of plastic catalogues arranged by company and by material is included.

SIMONDS, HERBERT RUMSEY

Industrial plastics. Third edition. New York Pitman Publishing Corporation 1945 396 p illus. 24 cm $5.00 1960

Contents. Introduction to the plastics industry Basic materials. Ten important plastics. Molding practice. Fabrication of plastics. Physical properties of plastics. Plastics and metals Equipment and plant. Industrial applications. Other plastics and borderline materials. Design and plastics. Future of plastics. Foreign practice. Chemistry of plastics. Plastics trade name index. Index.

Note (1939) A manual of information concerning the manufacture design properties and uses of plastic materials. It is intended for the user and designer of plastic goods and for the interested layman. The technical terminology is reduced to minimum. This edition has been enlarged to include descriptions of new developments and new commercial plastics. The chapter dealing at length with ten of the most important plastics has been changed to cover *phenol and urea formaldehydes, cellulose acetates, polystyrenes,* vinyl copolymers, methyl methacrylates, nylon, vinylidene chloride, polyethylene, and melamines. The chapter on foreign practice now gives emphasis to South American countries. The list of trademarks has been lengthened.

SOCIETY OF THE PLASTICS INDUSTRY INC

SPI handbook. New York *Society of the* Plastics Industry Inc. 1948 451 p illus 24 cm. $7.50 members, $4.50 1961

Contents Classification of plastics molding materials. Molding and forming plastics parts. Design of molded articles. Design standards for inserts—their application in plastics parts. Standards for tolerances on molded plastics parts. Cementing and assembly of plastics. Testing plastics parts. Mold design and recommended steels. Machining and finishing plastics parts. Laminated products and their fabrication Part I, Laminated thermosetting products standards. Part II, Recommended practice for fabricating laminated plastics. Index.

Note A reference book of scientific and technical data pertaining to the properties of plastic materials and to fabrication techniques. The greater part of the space is occupied by detailed discussions of operations in the manufacturing of articles from plastic materials. Compilation of the material was commenced at the instigation of the United States Government during World War II, and the material in it was obtained largely from manufacturers. Thus the book is more closely related to American manufacturing practices and contains more out-of-the-ordinary technical "know-how" than is usual in an engineering handbook. The text proper is supplemented by numerous illustrations and by tables of engineering data. The book is intended for engineers, manufacturers, designers, and others practically engaged in industry

THOMAS ISLYN

Injection molding of plastics New York Reinhold Publishing Corporation, 1947 534 p illus (part col d) 23 cm $10.00 1962

Contents History Development of injection molding techniques Materials for injection molding Molding practices. Product design Mold design and construction. Finishing and decorating. Estimating and costs. Appendices: Physical properties defined. General data. Index.

Note. An authoritative and thorough presentation. It is written chiefly from the practical standpoint and at level that will appeal to plant executives and design engineers. More than 300 diagrams, drawings, and photographs are included Many of these show details of molding machines or steps in molding processes. There is no bibliography

WAKEMAN REGINALD LESLIE

The chemistry of commercial plastics. New York Reinhold Publishing Corporation, 1947 836 p illus. 23 cm. $10.00 1963

Contents: Introduction. History of the plastics industry. Raw materials of the plastics industry. General chemical principles of resinification. Mechanical manipulation of plastics—molding. Phenolic plastics. Urea plastics. Melamine plastics. Aniline-formaldehyde resins. Aryl sulfonamide-formaldehyde resins. Alkyds and allied resinous esters. Polyamides—nylon. Coumarone-indene resins—miscellaneous hydrocarbon resins. Vinyl resins. Polyvinylidene chloride. Polystyrene. Polyvinyl carbazole. Acrylic resins. Casein resins. Natural and synthetic elastomers. Rubber derivatives. Cellulose plastics. Lignin plastics. Protein plastics. Polymeric organosilicon-oxygen compounds. Miscellaneous resins. Conclusion. Trade name index. Author index. Subject index.

Note Primarily intended as an orientation for plant chemists and executives, this work provides basic information about currently *important plastics*. A typical chapter for example *Acrylic resins*, outlines the developmental history of acrylics, discusses their chemistry and properties, describes the manufacture of commercial products from them, and concludes with list of references to pertinent literature. The volume contains nearly 200 tables and over 300 figures.

WINDING CHARLES CALVERT, AND R. LEONARD HASCHE

Plastics, theory and practice the technology of high polymers New York McGraw Hill Book Company Inc., 1947 280 p illus. 23 cm. $3 75 1964

Contents (abridged) The formation and structure of high polymers. General applications of resins. Resins formed from high molecular weight natural products Fossil and plant resins. Cellulose derivatives. Rubber derivatives. Casein and other protein plastics. Resins formed by condensation reactions. Polyethenic resins. Silicones. Rubber and synthetic rubbers. Appendix: Relative properties of common molding materials. Relative properties of rubbers Bibliography Index of trade names and companies. Visual aids. Index.

Note A concise, well-organized survey The authors have planned it chiefly for chemical engineers who are already familiar with organic chemistry hence no attempt is made to present the elementary side of the subject. Flow sheets that illustrate generalized methods of manufacturing the more important resins are included.

PETROLEUM CHEMISTRY

BELL HAROLD SILL

American petroleum refining Third edition. New York D Van Nostrand Company Inc., 1945 619 p illus. 23 cm. $7.50 1965

Contents. General introductory Crude oils and their characteristics. Chemical properties. Physical properties. Physical and engineering data. The manufacturing process. The refinery site and general arrangement. Distillation. Heat transfer Fractionation. Stills Pipe heaters. Condensers and heat exchangers. Distillation units. Cracking, theory and development. Thermal cracking. Catalytic cracking. *Motor fuels. Special processes* for motor-fuel blending agents. Chemical treatment. Dewaxing. Refrigeration. Solvent extraction. Filtration. Blending and compounding. Packages. Storage of oil. Volume measurements. Evaporation losses. Fire protection. Power and boiler house. General departments. Pumping of oil. Bulk transportation. The problem of the future. Index.

Note. A concise survey of current practice and processes in the petroleum refining industry Some historical and background information is also included. The volume is of value to managers, engineers and operating employees of oil refining plants, and as reference book for general information on the industry This edition incorporates considerable information on recent developments. Chapters on physical and engineering data have been added, and the chapters on cracking and dewaxing have been enlarged. Thermal and catalytic cracking are treated. The final chapter discusses briefly the production of petroleum products from oil shale, and by the synthesis of gases and the hydrogenation of coal.

KLOSKY SIMON compiler

An index of shale-oil patents. Washington D C Government Printing Office, 1948 360 p illus. 14 × 23 cm. (United States. Bureau of Mines. Bulletin 467) Paper $0 75 1966

Contents Nature and origin of shale oil. Method of finding patent abridgments. Part I, Shale-oil patents of the United States. List

of inventors and assignees. Part II, Other English language patents: Australian, British, Canadian, Union of South Africa. List of inventors and assignees. Part III, European language patents: Austrian, Belgian, Danish, French, German, Italian, Netherlands, Norwegian, Swedish, Swiss. List of inventors and assignees. Classification of shale-oil patents: Retorting processes. Distillation, fractionation. Chemical treatment. Cracking. Desulfurization. Solvent extraction. Hydrogenation. Byproduct recovery. Dewaxing. Products: Gasoline. Diesel fuels. Lubricants. Paraffins. Tars, cokes, etc. Miscellaneous.

Note This compilation is intended to include all patents on record in the United States Patent Office up to January 1, 1945 which pertain to the treatment of shale oil for use as an industrial fuel. The material is presented in the form of short notices describing the subject material of each patent, which consist of an abridgment of the patent (if British or Australian) or typical claim in the case of the United States or foreign patents. A subject grouping of the patents follows the abridgments. Most of the United States patents indexed, and some of the others, have illustrations.

SACHANEN, ALEXANDER NICHOLAS

The chemical constituents of petroleum. New York Reinhold Publishing Corporation 1945 451 p. illus. 23 cm. $8.50 1967

Contents: Petroleum gases and natural gasoline. Physical methods of determining hydrocarbons in distillates. Chemical methods of determining hydrocarbons in distillates. Hydrocarbons of straight-run distillates. Hydrocarbons of synthetic distillates. Petroleum wax. Oxygen compounds. Sulphur and nitrogen compounds. Resins and asphaltic products. Classification of crude oils. Author index. Subject index.

Note This work is primarily a reference book for petroleum chemists and other chemists who are called upon to analyze petroleum samples. It deals with methods of separating from crude petroleum the various constituents and identifying them and it provides structural and chemical data on petroleum constituents that have been separated and identified. The author points out that chemical separation of volatile and medium molecular weight hydrocarbons is not difficult, but that it is still difficult or impossible to isolate many of the high-boiling fractions. He stresses techniques of separating the constituents of high molecular weight by classes when separation of individual substances is impractical. The pertinent literature is keyed in the text and cited in extensive reference lists

SACHANEN, ALEXANDER NICHOLAS

Conversion of petroleum, production of motor fuels by thermal and catalytic processes. Second edition, revised and enlarged. New York Reinhold Publishing Corporation, 1948 602 p illus. 24 cm. $11 00. 1968

Contents: Thermal and catalytic reactions. Conversion of petroleum gases into motor fuel. Non-catalytic cracking. Catalytic cracking. Hydrogenation. Treatment of synthetic gasolines. Synthetic gasolines. Synthetic products other than gasoline. Author index. Subject index.

Note: (1940) A technical account of the basic principles of converting petroleum products into motor fuels, together with descriptions of the currently important processes. This edition has been extensively revised to incorporate new developments which have occurred since 1940, particularly those relating to catalytic cracking. The latter topic is now discussed at length. A new chapter has been added dealing with the conversion of petroleum gases into motor fuels. Most of the cost estimates figures have been revised, but in some cases prices quoted in the earlier edition have been retained. The extensive lists of references given at the end of each chapter have also been revised and brought up to date.

STORCH, HENRY HERMAN AND OTHERS

Synthetic liquid fuels from hydrogenation of carbon monoxide. Part 1 Review of literature, Bureau of Mines research on effect of catalyst preparation, reduction, and induction procedures on activity correlation of physical properties of the catalysts with their activity By H H. Storch, R. B Anderson, L. J E. Hofer C. O Hawk, H. C. Anderson and N Golumbic. Washington, D C. Government Printing Office, 1948 213 p. illus. 23 cm. (United States. Bureau of Mines. Technical paper 709) Paper, $0.50 1969

Contents: Introduction. Review of literature. Introduction (1913–33) Industrial development. Engineering development. Catalysts. Pressure, diluents, hydrogen carbon monoxide ratio, throughput, temperature, adsorption, and probable reaction mechanism. Properties of Fischer-Tropsch synthesis products. Fischer-Tropsch cost estimates. Bureau of Mines research on effect of catalyst preparation, reduction and induction procedures on activity. Catalyst testing experiments. Effect of variations in methods of catalyst preparation, reduction, induction, and synthesis conditions on activity and durability. Correlation of physical properties of catalysts with their activity. X-ray diffraction patterns and magnetic properties of iron catalysts. Surface properties of Fischer-Tropsch catalysts. Appendix on preparation of catalysts. Preparation of unpromoted iron catalysts. Preparation of promoted iron catalysts. Preparation of cobalt and nickel catalysts. Equipment used in preparing catalysts. Indexes: Numerical patent index. Author index. Subject index.

Note Because of the importance of information on synthetic liquid-fuel processes in insuring an adequate supply of motor fuels and lubricating oils in the United States, the Bureau of Mines has carried on research and process development work on the use of natural gas to produce gasoline and Diesel oil by the catalytic hydrogenation of carbon monoxide. This technical paper contains detailed record of experimental work done between 1943 and 1946 on the effect of mode of catalyst preparation, reduction, and induction on activity in the synthesis and on boiling range of the product. Also included are data on the X-ray diffraction patterns, magnetic susceptibility surface area, and porosity of the catalysts.

WEIL BENJAMIN HENRY AND J C LANE

Synthetic petroleum from the synthine process. Brooklyn, N Y Remsen Press Division Chemical Publishing Co., Inc., 1948 303 p. illus. 21 cm. $6.75 1970

Contents (abridged) Foreword, by H. H. Storch. Part I, Synthesis gas: Synthesis gas from coal in surface producers. Underground gasification of coal for synthesis gas production. Synthesis gas from natural gas. Part II, The catalytic synthesis: Reaction mechanisms. Catalysts. German processes. Part III, Products and by-products: Synthine process fuels. Synthine gasoline. Synthine Diesel oil. Synthine paraffin waxes. Lubricants. Part IV Basic economics: Economics of synthine products from coal. Economics of synthine products from natural gas. The current situation. Appendixes: Synthine patents. Government-released synthine reports. Supplemental bibliography. Subject index. Author index.

Note The catalytic hydrogenation of carbon monoxide to form hydrocarbons—known variously as the Fischer-Tropsch process and the synthine process—is of considerable interest for two reasons. It appears to offer a practical basis for the manufacture of gasoline and other products now made from petroleum when natural petroleum supplies prove inadequate. Under certain conditions such as an abundant supply of cheap natural gas, the process may pay its way at the present time in competition with petroleum. This book is essentially a summary of the information about the process that was published to about the end of 1946, and of the progress in applying it up to about the same time. It is written primarily for persons who have technical interests in the subject.

CERAMICS

GOULD, ROBERT EDWARD

Making true porcelain dinnerware, a discussion of processes. Chicago Industrial Publications, Inc., 1947 106 p. illus. 22 cm. $6.50 1971

Contents: Introduction. Raw materials. Compounding the body. Body preparation. Discussion of methods. Forming. Bisque firing. Finishing in the glost kiln. Glost firing. Combustion reactions of carbon and oxygen. Theoretical considerations. Drawing the glost kiln. Decorating. Summary. Appendix. Index.

Note. Contrary to the opinion held generally in the American dinnerware industry the author of this book—himself a manufacturer with experience in both Europe and the United States—believes that true or hard fire porcelain can be manufactured profitably in the United States. In support of this view he compares American and European raw materials, processes, machines and workers and in each category finds that the American manu-

facture would suffer no disadvantage. In making these comparisons the process of producing true porcelain is outlined step by step. The book is addressed to persons engaged in the industry or having practical interest in it. The appendix contains formulas and analyses.

GREAVES-WALKER, ARTHUR FREDERICK

Drying ceramic products. Fourth edition. Chicago Industrial Publications, Inc., 1948 112 p illus. 23 cm. $4 00 1972

Contents (abridged) Evaporation. The part played by air Water contained in ceramic materials. Shrinkage. Heat requirements. Types of dryers. Chamber and tunnel dryers heated by steam. Fans. Selection of fans. The designing of ducts or flues. Progressive dryers. Waste heat progressive dryers. Radiated heat dryer Infrared dryers. Control of drying. A theoretical method of running heat balance in dryer. Psychrometric charts. References on drying.

Note A concise exposition intended for plant operators and others in charge of drying operations. The physical principles of drying, the causes of dryer losses and how to prevent them, and the design of successful drying equipment are all discussed. Some illustrations of dryers are included. The mathematical computations require only knowledge of arithmetic and elementary algebra. The material was originally prepared as classroom lectures, and some of the chapters contain problems for the student to solve.

HALL FLEMMON PORTER, AND HERBERT INSLEY

Phase diagrams for ceramists Issued as Part II of the November 1947 issue of The Journal of The American Ceramic Society Columbus, Ohio The American Ceramic Society 1947 152 p illus 27 cm. $7 00 paper $5.00 1973

Contents Introduction. General discussion of phase diagrams: Definitions. Types of systems. Interpretation of diagrams Experimental methods for high-temperature heterogeneous equilibrium. Specific diagrams Metal oxide systems. Systems containing nonmetal oxides, halides, etc. Water-containing systems. Liquidus curves. Optical properties—miscellaneous crystalline systems. Temperature-deformation diagrams. Tabular index.

Note In this volume the chemical and physical characteristics of various systems which are of interest in ceramics are shown graphically in more than five hundred diagrams reproduced from various sources. Bibliographical citations are given to the original sources. The diagrams have been reproduced as originally published, that is to say the compilers have not recalculated the data. The diagrams are preceded by helpful discussion of the principles of representing chemical-physical systems graphically and of interpreting such graphs. This is the second edition of the compilation. The first edition was issued in the *Journal* of The American Ceramic Society Oct., 1933 and was supplemented in the April, 1938 issue of the same *Journal*. The present edition contains all of the diagrams that were in the first edition and the supplement, except for those which have been superseded by better ones, in which case the better ones are reproduced, and it contains also number of diagrams not previously included in the compilation.

NEWCOMB REXFORD JR.

Ceramic whitewares history *technology* and applications New York Pitman Publishing Corporation 1947 313 p. illus. 24 cm. (Pitman books on industrial materials and processes Alexander Klemin advisory editor) $5.00 1974

Contents A historical introduction, by Carlton Atherton. Silicate science. Raw materials for ceramic bodies. Body preparation. Forming and drying the ware Firing Properties and tests. Glazes and decoration. Ceramics in construction Ceramic products in the home. Electrical applications of whiteware products. Industrial uses of whiteware products. Abrasives. Appendix *Index*

Note The branch of the ceramic industry treated in this book produces such diversified wares as sanitary fixtures, floor and wall tiles, dishes, art objects, and electrical insulators. The author's purpose was to write survey of this class of ceramics that would be useful to manufacturers and engineers who are not experienced in ceramics but who might benefit from knowledge of the industry and the potential uses of its products. Much useful data regarding chemical constants, dielectric constants, fusion temperatures, and other properties of ceramic materials are tabulated throughout the volume. Selected lists of references are included with the chapters.

PARMELEE, CULLEN WARNER

Ceramic glazes. Chicago Industrial Publications Inc. 1948 321 p illus. 24 cm. $7.50 *1975*

Contents Definition of glazes. Glaze materials. Calculations. Mixing and milling. Application. Conversion of the batch to the glaze. Leadless glazes. Fritted glazes. Raw lead glazes. Engobes, slips, and underslips. Underglaze and overglaze colors. Glaze defects. Index.

Note A comprehensive summary of basic information regarding glazes and the art of glazing, as based on review of the literature of the subject and on the author's wide experience as Professor of Ceramic Engineering at the University of Illinois. The volume provides detailed information regarding the sources, analyses of constituent materials, methods of preparation, application, and firing of glazes in modern use. This and the tabulated data relating to compositions and formulations will be of value to both professional and *amateur ceramicists. Foot-note references are included* but there is no formal bibliography

PAINT AND VARNISH

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on paint and paint materials (1947) Philadelphia spring meeting American Society for Testing Materials, February 25, 1947 Philadelphia American Society for Testing Materials 1948 115 p illus. 23 cm. (Special technical publication no 75) $2 65 paper $2.00 1976

Contents Introduction, by C. H. Rose. Test methods and the paint industry by J. C. Moore. Methods of evaluation of industrial finishes, by R. A. Pringle and E. M. Yocke. Evaluation of the properties of automotive and appliance finishes, by F. O. Wood and N. P. Beckwith. Methods of evaluation of metal container finishes, by J. H. McKenzie. Methods of evaluation of marine finishes, by A. L. Alexander Particle size by gas adsorption, by E. N. Harvey Jr. Interchemical inclined tube viscometer by M. R. Kenward. Stroboscopic timer for Stormer viscometer, by E. P. Peterson and J. W. Prane. Introduction to statistics, by A. E. R. Westman. How paint technologists can use statistical methods, by E. I. Stearns. Statistical analysis of test data on accelerated weathering of panels, by R. Hill, O. Cook and W. E. Meyer

Note The papers in this volume reflect the current interest of the paint industry in the evaluation of the new paint materials, especially the synthetic materials. They deal for the most part with recently developed methods of testing and testing apparatus.

MATTIELLO JOSEPH J editor

Protective and decorative coatings. Volume V Analysis and testing methods analysis of resins and drying oils, testing of metal finishes, spectral characteristics of pigments and resinography New York John Wiley & Sons Inc., 1946 662 p illus 23 cm. $7 00. 1977

Contents. The analysis of resins, by Robert W. Stafford and Earl F. Williams. Analyses of drying oils, by Theodore F. Bradley and Edward L. Kropa. Laboratory testing of metal finishes, by S. E. Beck. Spectral characteristics of pigments in the visual and infrared bands, by Vincent C. Vesce. Resinography by T. G. Rochow and R. L. Gilbert. Index.

Note (1951) In the present volume of this comprehensive treatise analytical and testing methods of value in the paint and varnish industry are discussed by eight specialists. Procedures are

discussed critically and are described in sufficient detail for the guidance of analysts at work in the industry Full references are given to the original sources. The chapter on spectral analysis includes a series of 200 graphs on which are plotted the reflectance values at four selected wave lengths of light for virtually all of the important pigments. "Resinography," the term which serves as the title of the final chapter was coined by the authors of this chapter to denote the graphic study of resin structure, particularly the correlation of the microscopic structure with other physical and chemical properties.

PRATT LYDE STUART

The chemistry and physics of organic pigments. New York John Wiley & Sons, Inc., 1947 359 p illus. 24 cm. $6 00 1978

Contents: Introduction. History Color and chemical structure. Color and physical structure. Raw materials. Intermediates. Pigments from natural organic colors. Synthetic organic pigments. Testing of pigments. Identification of organic pigments. Pigment types and properties. Conclusion. Bibliography Index.

Note: A useful critical review of present-day knowledge relating to the preparation, chemistry and physics of organic substances used as coloring materials in paints, inks, plastics, etc. as distinguished from the soluble organic dyestuffs. However since most organic pigments are derived from or are closely related to organic dyes, the book contains much material on dyestuffs. The treatment is intended for specialists or at least for persons with adequate training in organic chemistry Literature references are selected, nevertheless the bibliography contains 148 references.

STEWART JEFFREY R., AND OTHERS

The national paint dictionary a handy reference volume containing definitions of terms and scientific materials used in the paint and allied industries by Jeffrey R. Stewart, assisted by Eugene F Hickson and Raymond B Seymour 200 illustrations. Third edition. Washington, D C. Stewart Research Laboratory, 1948 704 p illus. 23 cm. $7.50 1979

Note: (1933) A reference book of definitions of terms used in the paint and varnish industries. It includes the terminology of raw materials, machinery testing instruments, processes, and products. Trade names and jargon also are included The definitions are, generally speaking, phrased in technical terminology and are intended for makers and users of paint. Some of them include chemical analyses and statements of physical properties. In this edition the format of the book has been changed so that the volume is now more convenient to handle. Some of the illustrations and technical data that appeared in the second edition have been dropped. New terms that came into use during World War II have been included.

TOCH, MAXIMILIAN

Paint, paintings and restoration. Second edition. New York D Van Nostrand Company Inc., 1945 149 p illus. 22 cm. $5.00 1980

Contents: Introduction. Paintings. Scientific photography of oil paintings. Pictures and those who buy them. Imitations. The determination of genuine paintings. Infrared photography The simple palette. Glazing. Permanent colors. X-ray as applied to paintings. Ultra-violet light. The varnishes. Dammar as a picture varnish. The newer picture varnishes. The synthetic resins. Lacquers. Stand oil. Restoration of paintings. Composition of varnishes and their removal. Pigments. Grinding oil colors. Foundations for painting canvas, wood and metal. Bibliography Index.

Note The first half of this volume describes the various techniques used in the examination of paintings with a view to determining their authenticity The remainder of the book discusses methods used in restoration of paintings, together with a technical review of the varnishes, lacquers, pigments, and other materials used by painters and restorers. In this edition, the chapters have been rearranged, and new material added on the detection of imitations, foundations for painting canvas, wood and metal; infrared photography and picture varnishes.

VON FISCHER, WILLIAM, editor

Paint and varnish technology New York Reinhold Publishing Corporation, 1948 509 p illus 23 cm. $8.00 1981

Contents: Introduction to the protective coatings industry by E. Schulze. Drying oils: their origin, manufacture and properties, by E. G. Sorensen. The chemistry of improved drying oils, by E. L. Terrill. Pigments—general classification and description, by R. S. Radcliffe. White hiding pigments, by W H. Madson. Organic toners and mineral pigments, by E. F Diedrich. Resin and resin derivatives, by A. A. Albert. Natural resins and kindred products, by G. T Bold. Alkyd resin technology by C. L. Levesque. The chemistry of urea and melamine coating resins, by R. W Auten. Phenolic resins in protective coatings, by R. R. Waters. Miscellaneous resins in protective coatings, by H. G. Whitcomb. Solvent type resins (nitrocellulose lacquers) by J. R. Yeager A. R. Olsen and E. W Kessling. Hydrocarbon thinners, by E. H. McArdle. Formulation of the "volatiles" in nitrocellulose lacquers, by C. D. Bogin. The application of metallic soaps as driers, fungicides, suspending agents and flatting agents, by S. B. Elliott. The testing of raw materials, by R. F Wysocki. Principles of paint formulation, by H. W Dull. Resin and varnish manufacture, by J C. Weaver Industrial finishes, by E. C. Sherman. Trade sales paints—exterior—interior by A. B. Holton and H. G. Hayward. Water and emulsion paints, by D. A. Kohr Jr Solvent-type finishes, by E. P Wilson. The examination of paints, by F Schofield. Surface preparation, by R. E. Marra. Methods of applying surface coatings, by G. B Sawyer L. W Lauenstein and E. P Miller Resin and varnish making equipment, by D M. Wilhelm and G. H. Mutersbaugh. Index.

Note A collection of lectures in edited form which were developed originally for use in instruction at the Case Institute of Technology Most of the authors are chemists associated with industrial production of paint materials and paints. In most cases the specific topic of a lecture is treated descriptively and from a practical viewpoint, but much information is included that would be difficult to find elsewhere.

VARIOUS SUBSTANCES

ABRAHAM HERBERT

Asphalts and allied substances their occurrence, modes of production, uses in the arts and methods of testing. Fifth edition. New York D Van Nostrand Company Inc., 1945 2 v 2142 p illus. 23 cm. $12 00 1982

Contents. Volume I, Raw materials and manufactured products Part I, General considerations Historical review Terminology and classification of bituminous substances. Chemistry of bituminous substances. Geology and origin of bitumens and pyrobitumens. Annual production of bituminous substances and their manufactured products. Part II, Semi-solid and solid bitumens and pyrobitumens Methods of mining, transporting, and refining. Mineral waxes. Native asphalts occurring in a fairly pure state. Native asphalts associated with mineral matter Asphaltites. Asphaltic pyrobitumens. Pyrobituminous shales. Part III, Tars, pitches, and pyrogenous asphalts General methods of producing tars. Wood tar wood-tar pitch and rosin pitch. Peat and lignite tars and pitches. Shale tar and shale-tar pitch. Coal tar and coal-tar pitch. Water-gas and oil-gas tars and pitches. Fatty-acid pitch, bone tar and bone-tar pitch. Part IV Pyrogenous asphalts and waxes: Petroleum asphalts. Paraffin wax, wax tailings and petroleum residues. Wurtzilite asphalt. Part V Manufactured products and their uses. Compounding of bituminous substances. Bituminous substances admixed with discrete aggregates. Bituminous substances dispersed in water Bituminous substances dissolved in solvents. Solid, semi-solid and semi-liquid bituminous compositions Bituminous paving materials. Bituminized fabrics, felts and papers for roofing, flooring, waterproofing, building and insulating purposes. Bituminous lacquers, cements, varnishes, enamels and japans. Volume 2 Methods of testing, bibliography and references. Part VI, Methods of testing: Sampling. Examination of crude, refined and blended bituminous substances. Examination of bituminous substances combined with discrete aggregates. Examination of bituminized fabrics. Examination of bituminous-solvent compositions. Examination of bituminous dispersions. Weathering tests. Temperature conversion table. Bibliography References. Index of subjects. Index of specifications. Index of names (authors and patentees) Index of patents.

Note: (1933) This comprehensive work deals with asphalts, tars and pitches, and with the industrial products and processes for which they are used. The various deposits of natural asphaltic material throughout the world are discussed, country by country

and the tars and pitches which are produced by distillation and other industrial means are described. Detailed accounts are given of the industrial operations in which asphaltic materials are used, and the methods of testing are furnished for these various raw materials and their finished products. Special features of this fifth edition are the new 64-page bibliography—itemizing over 900 treatises—the 92-page index of patents, and the indexes of authors—patentees, and specifications.

AMERICAN CHEMICAL SOCIETY DIVISION OF RUBBER CHEMISTRY

1940–41 bibliography of rubber literature (including patents) Akron, Ohio American Chemical Society Division of Rubber Chemistry 1945 296 p 23 cm. $5 00 1983

Note: The scope of this work is all of the literature on rubber and its compounds published throughout the world in 1940 and 1941 The references are classified under topics, and there are full author and subject indexes. Each entry is accompanied by short abstract. The work was first issued in 1934 and covered the literature of 1935. Subsequent volumes covered the literature of 1936 1937 and 1938–39 All of these volumes were published by *Rubber age* this is the first under the present imprint. However this volume also is distributed by *Rubber age*.

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on rubber testing, fiftieth annual meeting, American Society for Testing Materials, Atlantic City N J June 16–20 1947 Philadelphia American Society for Testing Materials 1947 109 p illus. 23 cm. (Special technical publication no 74) Paper $2.00 1984

Contents: Introduction, by Simon Collier The significance of voluntary standards and their status in the rubber industry by A. W Carpenter Functions of rubber reserve—past, present, and projected, by W R. Hucks. Development of methods of chemical analysis of synthetic rubber by W P Tyler and T Higuchi. Developments and improvements in methods of stress-strain testing of rubber by J W Schade and F L. Roth. Development and standardization of tests for evaluating processibility of rubber by R. H. Taylor J. H. Fielding, and M. Mooney Standardization of testing and inspection in government synthetic rubber plants, by L. Mowee R. D. Stiehler and R. W Hackett. Testing and grading of wild and plantation rubbers, by N Bekkedahl. The use of statistical methods in rubber evaluation, by M. M. Sandomire.

Note In these papers physical and chemical methods of testing synthetic and natural rubbers developed or utilized during World War by United States government agencies and by industry are described. The first paper reviews standardization efforts in the industry before World War and points out the need for further effort. The second paper reviews briefly the activities of the Rubber Reserve Company and allied government agencies in the stockpiling of natural rubber and the production of synthetic.

BAILEY ALTON EDWARD editor

Cottonseed and cottonseed products their chemistry and chemical technology New York Interscience Publishers, Inc. 1948 936 p. illus. 24 cm. (Fats and oils a series of monographs) $10 00 1985

Contents Part I, History and present state of the cottonseed industry History of cotton and the United States cottonseed industry by M R. Cooper Production and consumption of cottonseed and cottonseed products, by C. E Lund. Part II, Composition and characteristics: Structure of the cottonseed, by J Leahy Cottonseed composition—relation to variety maturity and environment of the plant by W H. Tharp Biological processes of the cottonseed, by A M Altschul Pigments of cottonseed, by C. H. Boatner Cottonseed oil, by A E Bailey Cottonseed proteins, by T D Fontaine. Miscellaneous constituents, by F G. Dollear and K. S. Markley Part III, Grading and evaluation of cottonseed and its primary products Grading and evaluation of cottonseed, by G. S. Meloy Grading and evaluation of cottonseed oil, cake, and meal, by E. R. Barrow Grading of cotton linters, by G. S. Meloy Part IV Cottonseed processing Handling and storage of cottonseed, by O. H. Alderks. Mechanical pretreatment of the seed, by A. C. Wamble. Cooking of meats and recovery of the oil, by O. H. Alderks. Economics of cottonseed crushing, by J. F Moloney Part

Utilization of cottonseed products Processing of cottonseed oil, by E. M. James Edible cottonseed oil products, by H. C. Black. Nutrition aspects of cottonseed oil utilization—the role of fat in human nutrition, by H. J Deuel, Jr Nonedible cottonseed oil products, by O. H. Wurster W J Govan, J and G. J. Stockmann. Cottonseed as source of animal feedstuffs, by F Hale and C. M. Lyman. Miscellaneous products from seed and meal, by A. E. Bailey Cottonseed hulls, by J W Dunning. Cotton linters, by P Van Wyck. Author index. Subject index.

Note: This comprehensive treatise on the cottonseed industry constitutes valuable reference manual on all phases of the industry Each of the 24 chapters has been prepared by scientist or industrialist well qualified to discuss particular phase of the subject.

BAILEY, ALTON EDWARD

Industrial oil and fat products. New York Interscience Publishers, Inc., 1945 735 p illus. 24 cm. $11 00 1986

Contents: The nature of fats and oils: The structure and composition of fats and oils Reactions of fats and fatty acids. Physical properties of fats and fatty acids. Role of fats in the diet of man. Raw materials for oil and fat products: Sources, utilization, and classification of oils and fats. Production and consumption of primary fats and oils. Composition and characteristics of the individual fats and oils. Industrial utilization of fats and oils Cooking and salad oils salad dressings. Plastic shortening agents. Butter and margarine. Bakery products and confections Soap and other surface-active materials. Paints, varnishes, and related products. Miscellaneous oil and fat products. Unit processes in oil and fat technology Extraction of fats and oils. Refining and bleaching. Deodorization. Hydrogenation. Soapmaking Fractionation of fats and fatty acids. Fat splitting, esterification, and interesterification. Polymerization, isomerization, and related processes. Solidification, homogenization, and emulsification. Author index. Subject index.

Note. A technical survey of the various fatty products of commerce, their uses, and the processes used in their manufacture Raw materials are considered with respect to their composition, availability and consumption. In connection with edible fats and oils, considerable material, not hitherto published, is supplied on plastic shortening agents and bakery products, and on the practical operations of refining, bleaching, deodorization, and hydrogenation Numerous references are provided in footnotes

BALCH ROYAL TYLER

Wax and fatty byproducts from sugarcane. New York Sugar Research Foundation Inc., 1947 62 p illus. 23 cm. (Technological report series. No 3) Paper Gratis. 1987

Contents: History of sugarcane wax. Potential supply of sugarcane wax and byproducts Extraction of crude wax from press cake. Resolution of crude wax into its wax and fatty fractions. Refining the dark hard wax from press cake. Chemical data on sugarcane wax products Methods of analysis. Physical properties of sugarcane wax products The fatty fraction of crude wax. Extracted press cake. Cost of producing sugarcane wax. Summary Bibliography Author index.

Note Wax from sugarcane has been produced commercially with varying degrees of success, since 1914. This brief description of practical and economically sound method for producing the wax is based on investigations which have been carried on over period of some thirty years. Actual production techniques are supplemented by brief discussions of the properties and uses of sugarcane wax and its products, and processing costs. The bibliography consists of eighty-six references.

BOGUE, ROBERT HERMAN

The chemistry of Portland cement. New York Reinhold Publishing Corporation, 1947 572 p illus. 23 cm. $10 00 1988

Contents Part I, The chemistry of clinker formation History of the cement industry Classification of cements. The manufacture of Portland cement. Early experimentation on the constitution of Portland cement. Methods of investigation. Heat treatment in manufacture. The principal constituents of clinker. The combination

of the cement components. Design and control of cement composition. Calculation of phase composition. Part II. The phase equilibria of clinker components: The principles of high-temperature phase research. The technique of high-temperature phase research. The system $CaO-Al_2O_3-SiO_2$. Systems containing MgO with CaO, Al_2O_3 and SiO_2. Systems containing FeO and TiO_2. Systems containing Fe_2O_3 with CaO and SiO_2. Systems containing MgO and Fe_2O_3 with CaO and Al_2O_3. Systems containing MgO and Fe_2O_3 with CaO, Al_2O_3 and SiO_2. Systems containing K_2O. Systems containing Na_2O and Li_2O. Part III. The chemistry of cement utilization: Early studies on cement hydration. The system $CaO-SiO_2-H_2O$. The systems containing CaO and H_2O with Al_2O_3 and Fe_2O_3. The calcium aluminate and ferrite complex salts. The heat of hydration. The structure of hydrated cements. The setting of cement pastes. The hardening of cement pastes. External reactions of hydrated pastes. Tests for cement quality. Appendices: X-ray diffraction patterns of clinker components and compounds. X-ray diffraction patterns of cement hydration products. Equations for calculating the phase composition of clinker. Author index. Subject index.

Note: A valuable monograph for cement chemists and research workers. The discussions of phase rule relationships for the high-temperature fusion chemistry of clinker formation and for the water-cement systems that operate in cement hardening processes are particularly important. Literature pertinent to the text is cited in extensive reference lists appended to the chapters, but a comprehensive bibliography of the subject was not attempted. The author is Research Director of the Portland Cement Association Fellowship at the National Bureau of Standards.

DELMONTE JOHN

The technology of adhesives. New York Reinhold Publishing Corporation 1947 516 p. illus 23 cm. $8.00 1989

Contents: Introduction and classification of adhesives. Phenolic resin adhesives. Urea and melamine resin adhesives. Miscellaneous thermosetting resin adhesives. Polyvinyl resin adhesives. Polystyrene and acrylic resin adhesives. Adhesives from miscellaneous thermoplastic synthetic resins. Rubber adhesives. Adhesives from cellulose derivatives. Adhesives from protein substances. Vegetable glues and natural resin adhesives. Animal glues. Sodium silicate adhesives. Theories of adhesive action. Adhesives for wood. Cementing of organic plastics. Adhesives for metal and rubber. Adhesives for tapes, papers, cloths, and foils. Adhesives for inorganic materials. Tests and specifications for adhesives. Index.

Note: A comprehensive work based on an extensive survey of the periodical and patent literature. It is probably the most complete treatment in book form of the types, chemistry, properties, and uses of adhesives, but it contains relatively less material on the practical selection of adhesives and their application in the factory. The basic principles of application are, however, thoroughly discussed. The literature of the subject, including patents, is cited in extensive chapter reference lists.

ELLIOTT STANLEY B

The alkaline-earth and heavy-metal soaps. New York Reinhold Publishing Corporation 1946 342 p. illus. 23 cm. (American Chemical Society Monograph series) $7 50 1990

Contents: The constitution of metallic soaps. Organic raw materials. Inorganic raw materials. Solvents and addition agents. Precipitated soaps. Fused soaps. The soap plant and equipment. The classification of soaps. Applications of metallic soaps. Soaps of Group I metals (Cu, Ag). Soaps of Group II metals (Ca, Sr, Ba, Be, Mg, Zn, Cd, Hg). Soaps of Group III metals (Ce, Al, Tl). Soaps of Group IV metals (Ti, Zr, Hf, Th, Sn, Pb). Soaps of Group V metals (V, Sb, Bi). Soaps of Group VI metals (Cr, U). Soaps of Group VII metals (Mn). Soaps of Group VIII metals (Fe, Co, Ni). Analysis of metallic soaps and raw materials used in their manufacture. Appendix I—patents pertaining to the use of metallic soaps. Appendix II—metallic soap specifications. Appendix III—applications of metallic soaps. Appendix IV—conversion tables, etc. Appendix V—common commercial metallic soaps. Appendix VI—inorganic compounds suitable for preparing metallic soaps for research. Glossary. Author index. Subject index.

Note: A useful survey of the manufacture, properties and uses of alkaline-earth and heavy-metal soaps. It is intended for manufacturers, production men and chemists who are interested practically in these products or who are undertaking research in the field. Soaps that are not yet used commercially and soaps that have found wide application are both considered, but the emphasis is on the latter group. The literature including patents is freely cited.

GUENTHER, ERNEST

The essential oils. New York D Van Nostrand Company Inc., 1948 427 p illus. 23 cm. $6.00 1991

Contents: Volume 1. History—origin in plants, production—analysis: The origin and development of the essential oil industry, by George Urdang. The chemistry, origin and function of essential oils in plant life, by A. J. Haagen-Smit. The production of essential oils—methods of distillation, enfleurage, maceration, and extraction with volatile solvents, by Ernest Guenther. The examination and analysis of essential oils, synthetics, and isolates, by Edward E. Langenau. Appendix. Index.

Note: When complete, this work will constitute a thorough and authoritative review of the whole subject of essential oils. The second volume will deal with the chemical constituents of essential oils and succeeding volumes will consider individual oils in detail. The chief feature of the first volume is the extended discussions of chemistry and of manufacturing procedures from the viewpoint of practical industry. Other features are the numerous tables of data and the excellent selected lists of literature. The author is Vice-president and Technical Director of Fritzsche Brothers, Inc.

GUTTAG, ALVIN

Patents on the reactions of sugars a digest. New York Sugar Research Foundation Inc., 1947 108 p. illus. 23 cm. (Technological report series. No. 1) Paper Gratis. 1992

Contents: Scope of the digest. Alien property custodian applications. U. S. reissue patents. United States patents. Foreign patents (subclasses 9, 17.2, 17.3, 17.4 only): British. French. Dutch. German. Swiss. Subject index. Author index. Assignee index.

Note: The majority of the patents included in this digest are taken from the U. S. Patent Office Class 260 (Chemicals, Carbon compounds) and deal with chemical reactions involving sugar or sugar derivatives. Patents concerned with the manufacture and purification of sugar or with its use in foods, medicines, etc., are not included. A brief abstract of each patent is given, but no attempt is made to present a critical evaluation. The listing includes 318 U. S. patents from no. 98,141 (1870) to no. 2,398,704 (1946), 18 British, 8 French, 1 Dutch, 8 German, and 2 Swiss.

HOWARD FRANK ATHERTON

Buna rubber the birth of an industry New York D Van Nostrand Company Inc. 1947 307 p. illus 22 cm. $3 75 1993

Contents. Rubber. Oil from coal. American rights in German synthetic rubber. Infancy of synthetic rubber. Butyl rubber and aviation gasoline. The last year of peace. War in Europe. The Munitions Board. Europe falls. The Advisory Commission. The problem comes to R. F. C. Indecision. Laying the foundations. Establishing industrial cooperation. Setting the war program. Controversy. Confusion. The Baruch committee. The rubber director. The new industry. Appendix. Index.

Note: Of historical rather than technical importance, this work gives an authentic account of certain major aspects of the founding of the synthetic rubber industry in the United States. It describes the progress after World War I in the making of Buna rubber under the joint research project of the Standard Oil Company (N. J.) and I. G. Farbenindustrie. The problems which arose at the outbreak of World War II over the joint ownership of the Standard-I. G. Company is discussed at some length and the reports of the settlements made are included in the appendix. Much additional documentary material on the organization and operations of the industry in the United States is included.

KNAGGS NELSON S

Adventures in man's first plastic, the romance of natural waxes. Illustrations and jacket design by Frederic H. Kock. New York Reinhold Publishing Corporation, 1947 329 p illus. (part col'd) 24 cm. $6 75 1994

Contents (abridged): Expedition to the Amazon—caranday wax. War through the ages. Brazil's tree of life—carnauba wax. Exploring the big bend—candelilla wax. Schomacker treasury—spermaceti wax. The little lady has bag. Chin-L... and the wax cartoons—Chinese

Insect wax. Ouricuri, the ant killer tree—ouricuri wax. The esparto harvesters of North Africa—esparto wax. The mysterious bee, tireless fighter of mankind—beeswax. *A 60,000,000-year old plastic*—ozokerite earth wax. Wax from an ancient forest—montan wax. White crystals from black gold—paraffin wax—micro-crystalline waxes. Miscellaneous waxes. Technical reference section—properties of waxes—bibliography. Index.

Note The sources of natural waxes, the methods of collecting and preparing them, and their ancient and modern uses are all described in this interesting book, which is enlivened by accounts of the author's personal experiences in searching for waxes in remote parts of the world. The author is a professional chemist who has devoted many years to the study of natural waxes, and his book is written for anyone interested in the topic, from general readers to specialists like himself. The text is supplemented by a generous number of illustrations.

KRUMBHAAR, WILLIAM

Coating and ink resins a technological study New York Reinhold Publishing Corporation, 1947 318 p illus (part col'd) 23 cm. $7 00 1995

Contents Chemical fundamentals of coating and ink resins. Phenol resins. Maleic resins. Copal-type synthetics. Chemical characteristics of resins. Influence of resins on surface coatings. Influence of resins on printing inks. The application of resins. Machinery and equipment. The patent situation. Index.

Note Designed especially for research and process-control chemists, this study of ink and varnish resins is based largely on the author's own experience as a manufacturing chemist in this field. The discussions are confined to the light-colored, hard, soluble and high-viscosity groups of phenolic-, maleic- and copal-type synthetics. Considerable attention is paid to chemical fundamentals and to laboratory analyses of these resins, but the main effort has been to provide specific information about methods of production and usage.

LEFFINGWELL GEORGIA, AND MILTON LESSER

Glycerin its industrial and commercial applications. Brooklyn, N Y Chemical Publishing Co Inc. 1945 259 p 22 cm. $5 00 1996

Contents Brief history of glycerin. Adhesives and cements. Cleaners and polishes. Electrical equipment. Explosives. Leather. Lubricants. Metals. Packaging materials. Paper. Photography. Plastics. Printing and lithography. Paints and protective coatings. Rubber. Textiles and dyes. Tobacco. Glass. Agriculture. Cosmetics. Beverages. Foods. Medicine and surgery. Orthodontia and dentistry. Pharmaceuticals. Veterinary medicine. Optometry. Glycerin derivatives, by H. Bennett. List of 1583 glycerin uses. Appendix: Tables showing properties of glycerin. Index.

Note A survey of the proved and potential uses of glycerin. The material is based on a survey of periodical and patent literature and is classified as indicated by the headings in the contents. Under each heading is presented a compact statement of the uses of glycerin in the specific field or industry, a collection of useful formulas and recipes, and a bibliography of the literature including the patents. The final chapter is a classified list in tabular form of 1,583 uses of glycerin.

MCLAUGHLIN GEORGE DUNLAP AND EDWIN R. THEIS

The chemistry of leather manufacture, including chapters by Warren E. Emley, John H Highberger Ralph E Porter and Karl F Ruppenthal. New York Reinhold Publishing Corporation, 1945 800 p illus. 24 cm. (American Chemical Society monograph series) $10.00 1997

Contents: Introduction. Histology of skin. The composition and chemical structure of skin. Combination of proteins with acids, bases, salts, and heavy metals. Shrinkage temperature of collagen. Microorganisms. Curing. Soaking. Liming and depilation. Bating. Pickling. Aldehyde tanning. Quinone tanning. Chemistry of chromium salts. Chrome tanning. Theory of chrome tanning. Vegetable tanning. Theory of vegetable tanning. Iron tanning. Alum tanning. Syntans. Miscellaneous tannages. Neutralizing. Fatliquoring, oiling and stuffing leather and the materials employed. Physical testing methods. Author index. Subject index.

Note A comprehensive survey and appraisal of the current scientific knowledge of the tanning process with special attention to the chemical principles that underlie the various procedures, many of which have been developed empirically. It is based on a review of the literature and the various chapters are accompanied by extensive reference lists. The work is intended for professional leather chemists. Previous editions were prepared by John Arthur Wilson. In this edition Wilson's work, of which the last edition was published in 1929, has been very extensively revised and *rewritten to bring the treatment of the subject up to date.* However dyes and finishes, patent leather, furs, and microscopic and histologic techniques, all treated in Wilson's work, have been omitted.

MANTELL, CHARLES LETNAM

Industrial carbon its elemental, adsorptive and manufactured forms. Second edition. New York D Van Nostrand Company Inc. 1946 472 p illus. 23 cm. $7.50 1998

Contents Elemental forms: Diamonds. Natural graphite—properties, mining—dressing, applications. Carbon black. Lampblack. Acetylene black. Pigments. Adsorbents: Bone black. Vegetable decolorizing carbon. Gas adsorbents. Other adsorbent chars—metal adsorbent chars, pharmaceutical charcoal. Manufactures. Historical aspects of manufactured carbon. Artificial graphite. Raw materials for carbon manufacture. Preparatory processes—calcining—grinding. Electrodes. Brushes. Arc light and illuminating carbons. Carbon specialties and resistors. Carbon as a material of construction. Porous carbon. Electronic tube anodes. Refractories. Analyses and properties: Analytical and testing methods. Physical and chemical properties. Index.

Note A comprehensive survey of the many forms and uses of carbon in industry. Both common and uncommon uses are described. The book is intended as a reference book for scientific and technical workers, particularly chemists, physicists, engineers, and persons associated with the production of industrial carbon. The first edition was published in 1928, but this edition is so much revised and expanded that it is virtually a new work. A number of the chapters have been written by authorities other than the author. There is a fair number of references to the related literature, including patents.

MANTELL CHARLES LETNAM

The water-soluble gums. New York Reinhold Publishing Corporation, 1947 279 p. illus. 24 cm $6 00 1999

Contents: Classification and chemistry of the gums. Gums from the acacia tree and its varieties. India gums—ghatti, karaya and others. Gums from the astragalus plant. Miscellaneous gums. Hydrophilic colloids from seaweeds. The hemicelluloses—locust bean gum, seed extracts, and Iceland moss. The modified celluloses. The modified starches. The water-dispersible proteins. Gums in cosmetics and pharmacy. Gums in paints and coating compositions. Gums in textile operations. Miscellaneous applications. Specifications, identification, and testing. Native designations of the gums. Botanical index. Author index. Subject index.

Note Several hundred true gums, seaweed colloids, seed-extracts, manufactured dextrins, and cellulose derivatives all of which are capable of being dispersed in water or of absorbing it to form viscous adhesives, jellies, and pastes are discussed here. Sources and marketing are described, but the main emphasis is on chemistry and commercial applications. Related literature is cited in numerous footnote references. The work was written primarily to clarify the terminology and technology of gums for chemists and others *interested in this field.*

ORTHMANN, AUGUST CARL

Tanning processes. Chicago The Rumpf Publishing Co 1945 414 p. 23 cm. $12.50. 2000

Contents (abridged) Calf leather. Ooze kips. Sheepskins. Chrome side leather tanning. Patent leather. Chrome retan sole leather. *Pigskin.* Horse hide tannages. White leather. Harness leather. Vegetable tanned sole leather. Miscellaneous leathers. Coloring and coloring materials. Fatliquoring. Leather finishing materials. Chemicals used in the tannery. Vegetable tanning materials. Water in the tannery. Index.

Note: A practical work written by an experienced leather man and designed for practical tanners. Many formulas are given in full and the properties of their chief ingredients are described. There are occasional references to related literature but no systematic bibliography

SAGARIN, EDWARD

The science and art of perfumery New York McGraw Hill Book Company Inc., 1945 268 p. illus. 21 cm. $3.00 2001

Note: An account in popular terms of the historical, botanical, chemical, and commercial phases of perfume. It touches on the extraction of essential oils from flowers and plants; the use of animal secretions as perfume fixatives; the techniques of creating or modifying formula, psychological aspects of odor; and statistics and ramifications in the perfume industry An asset of the book is the bibliographical material consisting of more than two hundred titles on aromatics. Beginning with the writers of antiquity this includes the early herbalists, garden books, references to scent in literature, and handbooks for the perfumer and flavor chemist.

WARTH, ALBIN HENRY

The chemistry and technology of waxes. New York Reinhold Publishing Corporation 1947 519 p illus. 23 cm. $10 00 2002

Contents: Introductory Chemical components of waxes. The natural waxes. Fossil waxes, earth waxes, and lignite paraffins. Petroleum waxes. Synthetic waxes and wax compounds. Emulsifiable waxes, waxy acids and metallic soaps. Methods for determining the constants of waxes. Wax technology—uses in industry Appendix: Tables of physical constants of waxes. Author index Subject index.

Note. A comprehensive manual on the kinds, sources, chemistry physical properties, processing, testing, and uses of waxes. It is based on a wide survey of the literature, including patents, which is cited in extensive lists of references appended to the chapters The chapter on chemical components, which is thirty-two pages long, provides a useful summary of chemical data. The book is intended as a source of information for chemists, industrial users of waxes, and other persons whose interest in the subject is chiefly practical. The author is Chemical Director of the Crown Cork and Seal Company

WEST, CLARENCE JAY, editor

The utilization of sugar cane bagasse for paper board plastics, and chemicals an annotated bibliography New York Sugar Research Foundation, Inc. 1946 146 p 23 cm. (Scientific report series. No 3) Paper Gratis. 2003

Contents: Introduction. Pulp, paper and board. Plastics. Chemical and miscellaneous studies.

Note In this bibliography the author has sought to include all important references relating to the above subject, which have appeared up to October 1945. The listing is international in scope and covers both periodical articles and patents. Except for a few articles published prior to 1920, each entry includes an abstract ranging in length from a few lines to more than half a page. Within the three subject groupings, the references are arranged alphabetically by author or patentee. There is no index.

WITT JOSHUA CHITWOOD

Portland cement technology Brooklyn N Y Chemical Publishing Co., Inc. 1947 518 p illus 22 cm. $10 00 2004

Contents: History of the cement industry Raw materials. Proportioning raw materials. Preparing the raw mix. Fuels. Clinkering. Power Grinding the clinker Storing, packing, loading, and shipping. Plant design. Experimental engineering. The nature of cement. Analyses and tests. Concrete materials. Proportioning concrete materials. Concrete technology Miscellany

Note A general outline of all phases of Portland cement manufacture. Nowhere has the author covered the subject or any aspect of it exhaustively Rather he has stated the chief points, sometimes by quoting from published books and papers, then has given references to the related literature. Reference lists are appended to many of the chapters; and a series of bibliographies, some of which are annotated, occupies about thirty pages at the end of the book.

HEAT AND POWER ENGINEERING

GENERAL

COMPRESSED AIR AND GAS INSTITUTE

Compressed air handbook applications, equipment, engineering data and test procedure. New York Compressed Air and Gas Institute, 1947 387 p illus. 23 cm. $3 00 foreign countries $3 50 2005

Contents: Typical applications of compressed air and gas. Representative types of compressor installations. Portable air-operated tools and rock drills. Engineering the compressor installation for maximum efficiency. Compressed air engineering data and test procedure. Index.

Note Here is a guide to the proper methods of selecting, installing, using, and maintaining air compressors and compressed air driven equipment. Representative types of compressions and tools are discussed but no attempt is made to completely catalog all the equipment of each manufacturer. Hammers, hoists, drills, and grinders are among the air-operated tools described, and there are definitions of terms and standards as well as tables of data and formulas. Photographs of air compressors and auxiliary equipment are included. The Compressed Air and Gas Institute includes among its members many of the largest American manufacturers of air compressors.

DE LORENZI OTTO editor

Combustion engineering a reference book on fuel burning and steam generation. New York Combustion Engineering Superheater Inc., 1947 1025 p. illus. 23 cm. $7.50 $2 50 to libraries. 2006

Contents (abridged) Origin and production of coal. Stokers Pulverizers. Pulverized fuel burners. Furnaces for coal firing. Burners and furnaces for liquid fuels. Burners and furnaces for gaseous fuels. Furnaces for wood refuse and bagasse. Fluid cycles. Steam generators. Marine boilers. Superheaters Feedwater Heat recovery equipment. Testing of steam generating units. Selection of equipment. Performance calculations. Instruments, controls and interlocks. Recovery units for pulp mills. Flash drying and incineration. Modern boiler manufacture. Steam tables. Miscellaneous data.

Note An encyclopedic survey of fuel burning and steam generation on an industrial scale. Enough historical data are given to place important developments in accurate perspective, but the text and illustrations are concerned chiefly with current practices. The book was written by thirty specialists on the staff of Combustion Engineering Superheater Inc. There are many incidental references to this company' activities and products, but these do not detract from the potential usefulness of the book. The material is intended primarily for engineers and engineering students, and therefore rather technical in nature.

PUTNAM PALMER COSSLETT

Power from the wind. New York D Van Nostrand Company Inc., 1948 224 p illus. 24 cm $6.00 2007

Contents Personalities and history of the Smith-Putnam wind-turbine project, 1934-1945 How does wind behave?—our assumptions of 1939 The special wind-research program, 1940-1945 Behavior of wind in the mountains of New England, 1940-1945 The power in the wind and how to find it. Dungeons of other big windmills, 1920-1941 Development, fabrication and erection of the test unit, 1939-1941 Test and operation of the Smith-Putnam wind-turbine, 1941-1945 The best size for large wind-turbine The design of preproduction model, 1943-1945. Economics of large-scale wind-power Ways to reduce the cost of wind power The future of wind-power. Bibliography Index

Note In the main this volume is a record of the experiments in using wind power to generate electrical energy on commercial scale that were carried out from 1939 to 1945 by distinguished group of engineers and scientists under the sponsorship of the S. Morgan Smith Company York, Pa. It describes from an engineering viewpoint both the design and the performance of the 175-foot, 1,250 kilowatt unit that was erected on Grandpa's Knob near Rutland, Vermont. However the work goes beyond this single experiment and discusses the whole problem of utilizing wind as source of power. A good account is given of other experiments carried out by other individuals and groups.

APPLIED THERMODYNAMICS

DOOLITTLE JESSE SEYMOUR, AND ALEXANDER HAMILTON ZERBAN

Engineering thermodynamics theory and applications. Scranton Pa. International Textbook Company 1948 429 p. illus. 23 cm. (International textbooks in mechanical engineering Charles Fayette Taylor consulting editor) $6 50 2008

Contents: Introduction. Equations of state for perfect gases. Energy equations for non-flow processes. Steady flow Carnot cycle, available energy and entropy Vapors. Steam power cycles. Steam engines. Flow in nozzles. Steam turbines. Gas compressors. Refrigeration Gaseous mixtures and combustion. Imperfect gases. Air conditioning. Gas cycles. Internal combustion engines. Gas turbines. Appendix. Index.

Note Good organization and lucidity of style characterize this engineering college textbook. The greater part of the space is devoted to basic principles and phenomena but important applications are described in sufficient detail for beginning students. The first author is Professor of Mechanical Engineering at North Carolina State College and his co-author holds similar position at the Pennsylvania State College.

FAIRES, VIRGIL MORING

Applied thermodynamics Revised edition. New York The Macmillan Company 1947 480 p illus. 24 cm. (Engineering science series Earle Raymond Hedrick, editor) $5.25 2009

Contents The general energy equation. Characteristic equation of perfect gas. Energy equations of perfect gas Reversible nonflow processes of gases. The Carnot and Ericsson cycles. Entropy and the second law of thermodynamics. Cycles for internal combustion engines. Performance of internal combustion engines. Compression and expansion of air Flow of gases. Mixtures of gases. Combustion and the products of combustion. Variable specific heats. Liquids and vapors. Processes of vapors. The steam power plant and auxiliary apparatus Vapor cycles. Reciprocating steam engines. Modern cycles for steam power plants. Flow of steam in nozzles and orifices. Refrigeration. Mixtures of vapors and gases The transfer of heat. Index.

Note This standard text, designed for full length college courses, provides an introduction to the basic theories of thermodynamics and discussions of typical applications in engineering. This edition has been revised and enlarged to include an expanded discussion of

the second law of thermodynamics and heat transfer new material on the gas turbine, and extra illustrations. The author's *Elementary thermodynamics*, revised edition, New York The Macmillan Company 1948, 244 p., $4.40, intended for use in short courses in thermodynamics, and his *Problems on applied thermodynamics*, revised edition, New York The Macmillan Company 1948, 131 p., $1.70, manual prepared for use with the full-length text, have also been revised.

FAIRES, VIRGIL MORING

Theory and practice of heat engines. New York The Macmillan Company 1948. 388 p illus 24 cm. $5.00 2010

Contents: Characteristic equation of perfect gas. Forms of energy Heat, work, and internal energy Thermodynamic processes. Compressors. Internal combustion engines. The second law of thermodynamics. Liquids and vapors. Steam turbines. Nozzles. Reciprocating steam engines. Steam generators. Miscellaneous steam power plant equipment. Fuels and combustion. Refrigeration. Index.

Note A concise exposition that is particularly designed for courses offered to engineering students who do not plan to take additional courses in the subject. The major machines are described and illustrated, but the author's method is to emphasize the teaching of theory particularly the law of conservation of energy The book contains many extracts from the author's well known *Applied thermodynamics* (see above)

HAWKINS, GEORGE A.

Thermodynamics. New York John Wiley & Sons Inc. 1946 436 p. illus. 22 cm. $4.50 2011

Contents: Fundamental concepts. The first law of thermodynamics. Solids, liquids, and gases. The ideal or perfect gas. Equations of state for real gases. Specific heat of gases. The use of tables for computing the properties of vapors. Frictionless nonflow ideal gas and vapor changes. The Carnot cycle and the second law of thermodynamics. Available, unavailable energy and entropy Entropy changes for ideal gases and vapors. Mixtures of ideal gases and vapors. Combustion. The flow of gases and vapors through nozzles and orifices. Ideal cycles of internal combustion engines. Air compressors and air engines. The gas turbine and jet propulsion. Vapor cycles. Mechanical refrigeration. General thermodynamic equations. Introduction to heat transfer. Appendix. Index.

Note: The intended use for this book is as text in two-semester or with certain parts omitted, one-semester course in engineering thermodynamics. The chapter on gas turbines which contains two sections on jet propulsion including some details of the German-developed V-1 and V-2 rockets, and the chapter on heat transfer are unusual yet valuable accompaniments for work on thermodynamics. In addition to several tables showing the heat properties of such gases as SO_2, CO_2, and NH_3, the appendix provides an abbreviated set of Keenan and Keyes' steam tables and small Mollier enthalpy-entropy diagram for steam. Advanced calculus is required for thorough understanding of the exposition.

LICHTY LESTER CLYDE

Thermodynamics. Second edition. New York McGraw Hill Book Company Inc., 1948 341 p illus. 23 cm. $4 50 2012

Contents: Thermodynamic mediums and their coordinates. Energy and energy terms. The energy equation and processes. Properties of mediums. Thermodynamic processes. Mixtures of mediums Availability of energy Thermodynamic cycles. The combustion process. Internal-combustion engine and gas-turbine processes The flow of fluids, Thermodynamic relations and properties of mediums. Index.

Note: (1978a) A textbook for engineering students with the purpose of presenting, as simply as possible, explanations of fundamental theory and principles rather than the mathematical formulas and mechanical methods based on them. There are many examples, with their solutions, to illustrate the applications of the principles, and additional exercises upon which the student can test his understanding. The general plan of organization of the material in the first edition has been followed. Taking into consideration recent scientific developments, however and experience in the use of the text in courses as well, some sections have been rewritten, some amplified. The section on properties of media has been expanded. An entire chapter devoted to thermodynamic processes has been added, and also section on gas turbines.

MORSE, FREDERICK TRACY

Elements of applied energy New York D Van Nostrand Company, Inc., 1947 444 p illus. 24 cm. $5.50 2013

Contents Introduction to applied energy Thermodynamic properties. Fuels and combustion. Energy in action. Mechanical elements of heat engines. Air and energy Refrigeration and air conditioning. Spark ignition engines. Compression ignition engines. Gas turbines. Jet propulsion. External combustion power plants. Steam generation. Steam power Conclusion. Index. Supplement (tables and chart)

Note: A textbook for engineering college students. It is intended to serve either as preparation for more rigorous courses, or as terminal course for students not intending to pursue thermodynamics beyond an introductory course. The emphasis is upon applications of thermodynamics. The work is generously illustrated with reproductions of photographs and diagrams, and each chapter concludes with number of practical problems.

SKROTZKI BERNHARDT G A., AND WILLIAM A. VOPAT

Applied energy conversion, a text in power plant engineering New York McGraw Hill Book Company Inc., 1945 509 p illus. 23 cm. $5 00 2014

Contents. Raw energy Steam power plant—combustion theory and equipment. Steam power plant—steam generating units. Steam power plant—prime movers. Steam power plant—condensate and feed-water systems. Steam power plant—application. Diesel- and gas-engine plants. Hydraulic power plants. Power plant developments. The general economic problem. Load curves. Selection of plant. Station performance and operation characteristics. Specific economic energy problems. Energy rates. Appendix. Index.

Note. With view to turning out more thoroughly qualified technical administrators this new textbook for engineering college students treats both the equipment and the economic aspects of power plants. The treatment is compact and up to date. Recent developments, still more or less in the experimental stage, such as binary vapor cycles, combustion gas turbines, wind power and atomic energy are summarized in special chapter Problems and chapter bibliographies are provided. The first author is Assistant Editor of *Power* and the second author is Assistant Professor of Mechanical Engineering at the Cooper Union School of Engineering.

SOLBERG HARRY LELAND AND OTHERS

Elementary heat power by Harry L Solberg, Orville C. Cromer and Albert R. Spalding. New York John Wiley & Sons, Inc. 1946 480 p illus. 22 cm. $4 75 2015

Contents: Matter and energy Fuels and combustion. Internal-combustion engines Fuel-burning equipment. Steam generation. Steam power-plant cycles. Steam engines. Steam turbines. Pumps. Drafts, fans, blowers, and compressors. Feed-water heaters and condensers. The gas-turbine power plant. Mechanical refrigeration. Steam tables. Index.

Note: This textbook offers readable survey of the principles and mechanisms of heat power devices and machinery Although the exposition is intended for college students who have had courses in chemistry and physics, most of the text can be understood without such preliminary education. The book should therefore be useful to general readers who wish to know such things as what methods have been developed to obtain high efficiencies in power plants or how gas turbine operates. The authors are all members of the faculty of the School of Mechanical Engineering of Purdue University

YOUNG VINCENT WILLARD AND GILBERT A YOUNG

Elementary engineering thermodynamics Third edition. New York McGraw Hill Book Company Inc., 1947 268 p illus. 23 cm. $3.00 2016

Contents: Introduction. General laws and equations. Thermodynamic characteristics of gases. Frictionless nonflow processes—gas

systems. The Carnot cycle—entropy. Heat-engine cycles—gas systems. Air compression. Properties of vapors—vapor tables. Frictionless nonflow processes for vapors. Steady-flow processes for gases and vapors. Vapor cycles. Refrigeration. Mixtures of air and water vapor. Appendices. Index.

Note (1945) The third edition of this college textbook reflects wartime changes in emphasis on some of the applications of thermodynamics; it also provides revised discussions of certain topics, among which are Joule's law and entropy. The format remains the same as before, as does the purpose—namely to provide the engineering student with an introduction to the basic theory of heat work apparatus. Problems are included with each chapter.

STEAM ENGINEERING

BUTTERFIELD, THOMAS EDWARD AND OTHERS

Steam and gas engineering by Thomas E Butterfield, Burgess H. Jennings, and Alexander W Luce. Fourth edition. New York D Van Nostrand Company Inc., 1947 588 p. illus. 24 cm. $6.00 2017

Contents (*abridged*) Energy units, laws of thermodynamics. The steam engine. Properties of steam. Steam cycles. Fuels and power. Combustion. Combustion equipment for steam generation. The steam boiler. Boiler plant auxiliary apparatus. Steam turbine types and performance. Turbine nozzle and blading calculations. Condensers and condensing equipment. Steam power plant cycles, heat balances. Gas properties. Gas cycles. The internal combustion engine. Gas and gasoline engine types. Oil engines. The gas turbine. Compression and refrigeration. Index.

Note: (1948) An established textbook for students in engineering colleges. The treatment assumes that the reader will have had introductory college courses in physics, chemistry and calculus. As in previous editions, the greater part of the space is given to steam engineering. Emphasis is upon operating characteristics rather than mathematical analyses, but the treatment is not merely descriptive. In this edition the chapters on steam turbines, combustion equipment, compression in connection with combustion and refrigeration have all been expanded, and the work as a whole has been extensively revised and rearranged. The chapter on gas turbines is new addition and several useful tables have been added.

CROFT TERRELL WILLIAMS editor

Steam power plant auxiliaries and accessories revised by D J Duffin. Second edition. New York McGraw Hill Book Company Inc., 1946 583 p. illus 21 cm. $5.00 2018

Contents Pump theory and calculations. Reciprocating pumps. Centrifugal and other impeller-type pumps. Injectors. Methods of boiler feeding. Feed-water heaters, deaerators, evaporators. Economizers and air preheaters. Steam condensers. Spray ponds and cooling towers. Steam piping of power plants. Steam separators. Steam traps. Appendix. Solutions to problems. Index.

Note This work is designed as practical reference book for operating men in power plants and as textbook for students. Compared with the first edition (1922) the present edition is extensively revised and considerably enlarged. There is new material on such topics as deaerators, air preheaters, piping maintenance and civilization. The appendix of steam-engineering data also is new addition.

GAFFERT GUSTAF ADOLF

Steam power stations. Third edition New York McGraw Hill Book Company Inc., 1946 613 p illus. 23 cm. $5.50 2019

Contents Introduction. Steam engines. Steam turbines. Condensers. Feed-water heaters and evaporators. Feed-water treatment. Fuels and combustion. Steam generating units. High-pressure and binary-cycle boilers. Dust collectors. Economizers and air heaters. Superheaters and reheaters. Fuel-burning equipment. Duct work and piping. Draft systems. Coal and ash handling. Pumping equipment. Steam-station costs. Load curves and plant location. Selection of prime movers and steam-generating equipment. Cycle arrangement. Binary vapor cycles. Optimum cycle and units. Station design. Index.

Note A standard engineering college textbook which provides thorough introductory treatment of steam-operated prime movers, steam-generating equipment, power house auxiliary machinery, steam-power economics, and power station layout. It does not cover structural design or electrical machinery. In this edition there are no major changes as compared to the second edition but there are minor changes in several parts; the reference lists have been revised to include literature published since 1940, and enough material has been added to increase the length of the book by about twenty pages.

HIGGINS ALEX

Boiler room questions and answers. New York McGraw Hill Book Company, Inc., 1945 139 p illus 29 cm. $3.50 2020

Contents (*abridged*) Boiler regulations and methods of study. Water-tube boilers—figuring surface. Construction materials and details—heat-treatments and processes. Stays, stay bolts, boiler calculations. Steam gauges and water columns. Safety valves, water-level alarms, fusible plugs. Boiler feed and blowoff accessories, valves. Boiler construction, cleaning and inspection. Boiler foundations and erection. Some typical boiler repairs. Flue-gas analysis: method and meaning. Draft and its control. Hand firing and stoker firing. Facts about pulverized fuel, gas, oil and combustion. Boiler feed-water heating and treatment (Part) Heat facts, laws and problems. How to use steam tables. Injectors and pumps. Pipe and piping accessories. Index.

Note This book, written for power plant operating personnel, is designed primarily to help men prepare for written examinations for engineers' licenses. The exposition, in question-and-answer form, is supplemented by generous number of illustrations. The exceptionally thorough index makes the book useful also as reference manual to operating engineers on the job.

HIGGINS ALEX

Engine room questions and answers. New York McGraw Hill Book Company Inc., 1948 154 p illus. 28 cm. $4.00 2021

Contents Parts of the steam engine. Principle of the steam engine. The steam-engine indicator. Indicator diagrams and indicated horsepower. The simple slide valve. Special forms of slide valves. Valve diagrams. Reversing valve gears. Flywheels and governors. Corliss engines. Four-valve, uniflow and rotary engines. Compound engines. Condensers. Steam turbines. Steam-turbine details. Steam-turbine details of construction and operation. Friction and lubrication. Bearings and their lubrication. Index.

Note A helpful study guide and reference manual for engineering students and practical engineers organized on the same pattern as the author's *Boiler room questions and answers* described above. In this book, too, the exposition is cast in question-and-answer form and is supplemented by numerous clearly-reproduced illustrations.

MACNAUGHTON EDGAR

Elementary steam power engineering Third edition. New York John Wiley & Sons, Inc., 1948 640 p illus 23 cm. $6.50. 2022

Contents (*abridged*) Thermodynamic principles and processes. Properties of air, water and steam. Steam boilers and settings. Superheaters, desuperheaters, reheaters, purifiers and steam cycles. Fuels. Coal-handling and ash handling equipment. Combustion, flue-gas analysis, boiler losses. Methods of burning coal, smoke prevention, furnaces, and refractories. Methods of burning gas, oil, and pulverized fuel. Rating, efficiency and testing of steam boilers. Draft and methods of producing draft. Heat-saving equipment. Boiler feed-water conditioning, scale removal, evaporators, deaerators, and tube cleaners. Reciprocating steam engine—simple engines. Slide-valve engines, valve diagrams, and slide-valve setting. Multi-valve engines. Compound, multi-expansion, and uniflow engines. Steam turbines. Condensers and condenser auxiliaries. Steam-driven and power-driven pumps. Modern power plants and factors related to their design and operation. Appendix tables. General references. Index.

Note An engineering college textbook in which practical aspects are emphasized, but which contains also adequate expositions of the theory. All of the major and auxiliary types of steam generating equipment and steam power machinery are described. In most chapters the discussions of theory follow the descriptive material. A considerable portion of the book can be understood without mathematics and therefore is suitable as home study material for practical workers. Numerous changes have been made in this edition. There are now forty-three tables and almost 500 illustrations.

SEVERNS, WILLIAM HARRISON, AND HOWARD E DEGLER

Steam, air and gas power Fourth edition. New York John Wiley & Sons, Inc., 1948 509 p illus. 23 cm. $4 75 2023

Contents. Introduction. Heat power plants. Principles of thermodynamics. Steam and steam calorimetry Steam fuels and combustion. Steam generators or boilers. Steam generator auxiliaries. Feed-water heating and conditioning. Draft apparatus. Chimneys and fans. Reciprocating steam engines. Steam engine power and economy Steam and gas turbines. Steam-condensing equipment. Pumps. Compressed air. Internal-combustion engines. Appendix: Additional tables. Index.

Note. (4001) A standard engineering college textbook. It is designed for use in introductory courses, especially courses offered to students who do not plan to specialize in this branch of engineering and therefore require general rather than rigorous course. Elementary theory is covered and the principal types of heat power devices are described. This edition has newly added material on the gas turbine, and other changes have been made to bring the book up to date.

GAS AND OIL ENGINES

ADAMS ORVILLE L.

Diesel operation and maintenance. New York Prentice-Hall, Inc. 1946 366 p. illus. 24 cm. $5 00 2024

Contents: Fundamental problems. Problems of application. Basic problems of operation. Metallurgical problems. The fuel-mixing problem. Basic maintenance problems. Inspection procedure. Piston ring maintenance and inspection. Piston and liner maintenance. Bearing failures and maintenance problems. Problems of lubrication. Fuel oil and combustion problems. Appendices: Metallurgical glossary Tables and formulas. Lubricating oil specifications Index.

Note A skillfully written introduction to the basic principles and problems of Diesel engines, together with practical directions for Diesel engine operation, upkeep, and repair The author discusses the advantages, limitations, and the various types of Diesel engines, as well as major and minor overhaul procedures. Operating details, however are not as specific as those found in manufacturers' instruction manuals for particular makes of engines. The volume is intended for technical school classrooms or for self-instruction, and it assumes that the reader will be able to understand engineering terms and graphs. The author was an officer in the U. S Navy during World War and had charge of Diesel engine instruction and ship repairs for fleet of Diesel-driven ships

ALLEN OLIVER FIELD

The modern Diesel. New York Prentice-Hall, Inc. 1947 268 p. illus. 24 cm. $5.00 2025

Contents: Introduction. Early oil engines. Diesel and his engine. The four-stroke-cycle engine and its child, the two-stroke-cycle. Opposed-piston and free-floating-piston engines. Double-acting Diesels. Sleeve-valve engines. Getting the new charge in and the burned gases out. Putting in the fuel Supercharging, or pressure charging. Classifications. How the load is connected, and its influence on the engine. Diesels in marine service Diesels on the highways Diesel engines on rails. Dual-fuel engines. Diesels in the air Lead engines. The Diesel as boiler Fuel consumption and piston displacement. Oil engine power cost. What about coal? The economics of power. Trends in Diesel design. Questions. Index.

Note: In language understandable by anyone interested, whether or not he is familiar with engine terminology this book mentions the history of Diesel engines, emphasizes their construction and operational techniques, and outlines the Diesel's many uses. The 185 illustrations show Diesel engines of all types, cut-away views of engine interiors, and the numerous installations of Diesels today as mechanical power sources for electric light plants, locomotives, ships, air-compressors, cranes, tractors, etc. Questions covering facts presented in each chapter are listed at the back of the book and these make it appropriate for use as text.

FRAAS ARTHUR P

Combustion engines New York McGraw Hill Book Company Inc., 1948 439 p illus. 23 cm. $5.50 2026

Contents. Engine types and construction. Idealized cycles. Thermodynamic-calculation methods for combustion-engine cycles. Combustion. Cycle analysis. Fuel metering and injection. Ignition. Fuels and lubricants. Intake and exhaust manifolds. Lubrication. Cooling. Supercharging. Performance analysis. Gas turbines. Engine installations Overhaul and maintenance. Appendix. Index.

Note An engineering college textbook in which combustion theory lubrication theory etc. are discussed adequately but not exhaustively, and are immediately related to engine design and typical mechanisms of modern engines. The result is good general presentation of the subject for young engineers preparing for work in the engine-manufacturing industry or in industries that use combustion engines in considerable numbers. Spark-ignition and compression-ignition engines, as well as gas turbines, are covered. The book is not intended for the average automobile mechanic, and even the chapter on maintenance is written from the viewpoint of planning and supervision. Problems to be solved and selected references accompany the individual chapters.

HELDT, PETER MARTIN

High-speed combustion engines design, production tests Fourteenth edition of The gasoline motor Nyack, N Y P M Heldt, 1948 759 p illus 21 cm. $10 00 2027

Contents: The Otto cycle. Conversion of reciprocating into rotary motion. Balancing of engines. Combustion-chamber design—detonation and roughness. Engine cylinders. The crankcase—engine mountings. Production of engine blocks. Piston, piston rings, and piston pin. The connecting rod. Crankshafts and flywheels. Determination of bearing loads. Torsional vibration and vibration dampers. Engine valves. Valve-actuating mechanism. Camshaft and accessories drives. The working media—gasoline and air. The carburetor Ignition equipment. Bearings and lubrication. Water-cooling. Air-cooling. Manifolds and muffler Speed control—the governor Power output and other characteristics. Engine tests. Two-stroke-cycle engines. Unconventional engines. Appendix. Plate supplement. Index.

Note: (4011a) The first edition of this work appeared in 1911 under the title *The gasoline motor* It was then and is now intended specifically as reference manual for mechanical engineers and as text for engineering students Details of engines and engine subassemblies made by many of the leading American and British manufacturers are included in addition to the generalized discussion of gasoline engine theory and construction. The present revision gives greater attention to the two-cycle engine and omits the former chapter on thermodynamics. The latest practices in engine design have been incorporated, and there are about fifty new illustrations.

HELDT, PETER MARTIN

High-speed Diesel engines for automotive, aeronautical marine, railroad and industrial use with chapters on other types of oil engines and gas turbines. Fifth edition. Nyack, N Y P M. Heldt, 1947 479 p illus. 22 cm. $6.00 2028

Contents: Nature of the engine and its fields of application. Thermodynamics of the Diesel cycle. Combustion phenomena. Fuels for Diesel engines. Fuel injectors and sprays. Injection pumps, their principles and characteristics. Modern injection pumps and governors. Precombustion-chamber engines. Direct-injection engines. Turbulence-chamber engines. Auxiliary-chamber engines. Two-stroke engines Aircraft engines. Railroad engines. Miscellaneous types of oil engine. Supercharging. Some details of engine design. Methods of starting Diesel engines. Lubrication. Operation and maintenance. Gas turbines. Index.

Note: (4012) The purpose of this standard work is to describe the more important principles of Diesel engine design and to illustrate the application of these principles by reference to various engines incorporating them. Thus, it is essentially an account of typical and interesting design and mechanisms. It is fully illustrated. In this revision material has been added on two-cycle engines, fuels, and starting. Also, there is brief review of gas turbine principles and development.

MALKEV VLADIMIR LEONIDAS

Internal-combustion engines, theory and design Second edition. New York McGraw Hill Book Company Inc., 1945 636 p illus. 22 cm. $5 00. 2029

Contents (abridged) Principles of thermodynamics. Fuels. Combustion. Theoretical engine cycles. Combustion in spark-ignition engines. Combustion chambers of compression-ignition engines. Engine performance. Four-stroke engines. Two-stroke engines. Engine efficiencies. Four-stroke intake and exhaust. Supercharging. Two-stroke exhaust and scavenging. Cooling. Cylinders—cylinder heads. Reciprocating-rotary motion. Vibration and balancing. Lubrication. Crankshafts. Flywheels and governors. Starting—reversing. Rating—testing. Gas turbines. Index. Answers to even-numbered questions.

Note (4014a) A technical treatment used both as an engineering college textbook and as review for young design engineers. Familiarity on the part of the reader with thermodynamics and engineering mechanics is assumed, although the essentials of these subjects are briefly reviewed in the preliminary chapters. This edition is more than 200 pages longer than the first edition and includes newly added material on such subjects as fuels, combustion, and gas turbines. Pertinent literature is cited in occasional footnotes.

TAYLOR, CHARLES FAYETTE AND EDWARD S TAYLOR

The internal combustion engine. Revised edition. Scranton, Pa. International Textbook Company 1948 339 p illus. 24 cm. (International textbooks in mechanical engineering) $6.00 2030

Contents. Engine capacity and efficiency The air cycle. Thermodynamics of the fuel-air medium. Fuel-air cycles. Combustion in the spark-ignition engine. Detonation in the spark-ignition engine. Combustion in the compression-ignition engine. Direct heat losses. Mixture requirements of the spark-ignition engine. Fuels for the internal combustion engine Engine friction. Lubrication and oils. Spark ignition. Air capacity of four-stroke engines. Two-stroke engines. Engine performance The gas turbine. Bibliography Index.

Note. (4023) An engineering college text that has been planned for courses offered to students who are preparing to work in engine research and design. Many of the experimental data have been derived from original work carried out by the authors at the Massachusetts Institute of Technology The bibliography is extensive enough to be useful to engineers already at work in the field. The chapter on the gas turbine is new in this edition and there are many minor changes throughout the text. The bibliography has been revised.

VINCENT EDWARD THOMAS

Supercharging the internal combustion engine. New York McGraw Hill Book Company Inc. 1948 315 p illus. 23 cm. $5.00 2031

Contents Introduction and historical development Thermodynamics. The engine cycle Types of compressors. The impeller and diffuser Estimating operating conditions Surging in centrifugal superchargers. Testing superchargers. Turbosupercharging The axial-flow compressor The supercharged Diesel cycle Index.

Note The discussions of thermodynamics and the theoretical aspects of internal combustion engines, although thorough enough to command the respect of engineering students, are incidental to the descriptions of the mechanical details and operating characteristics of various types of compressors and related supercharging equipment. The book is intended chiefly as first book for persons with practical interest in the subject. However some familiarity with graphical methods and elementary engineering mathematics is necessary to understand the exposition. There is four-page bibliography

AUTOMOBILES

CROUSE WILLIAM HARRY

Automotive mechanics New York McGraw Hill Book Company Inc., 1946 673 p illus. 23 cm. $5 00 2032

Contents (abridged) Fundamentals of the automobile The engine Fuel system. Engine lubrication system. Engine cooling system. The electric system. Engine service. Clutches. Transmissions. Propeller shafts and universal joints. Rear axles and differentials. Springs and shock absorbers. Steering system. Brakes. Tires. Car frame and body Shop practice Index

Note Intended for apprentice mechanics, this comprehensive textbook provides both basic and an advanced course in automobile mechanics. Each mechanism or sub-assembly of the automobile is thoroughly described as to its construction, theory of operation, maintenance, diagnosis for troubles, disassembly repair reassembly and testing. Servicing and repair procedures recommended in manufacturers' shop manuals are followed throughout, and frequently the time required for given job is stated. Review questions follow each chapter The author' *Everyday automotive repairs*, New York. McGraw-Hill Book Co., Inc., 1944, 296 p., $3 00, is more elementary book intended for the car owner rather than the repairman.

HEITNER, JOSEPH, AND OTHERS

Elements of automotive mechanics, by Joseph Heitner Norman G Shidle, and Thomas A. Bissell. Second edition. New York D Van Nostrand Company Inc., 1946 395 p. illus. 23 cm. $2.80 2033

Contents The motor vehicle. Running system and body Power unit. Power train. Cooling system. Fuel system. Electrical system. Lubrication. Safety Index.

Note A general introduction to principles and construction details of automobiles. It is designed as first book in the subject for practical students, and is suitable for use in vocational school courses and as an aid in self-instruction. It does not cover all the details of maintenance and repair that will be found in manufacturers' manuals, but it does discuss the common troubles and the general methods of remedying them.

HELDT PETER MARTIN

The automotive chassis (without power plant) frames springs axles wheels, tires, drives steering gears brakes universal joints differential gears, and miscellaneous parts. Second edition. Nyack, N Y P M. Heldt, 1948. 599 p illus 22 cm. $7 00 2034

Contents. General considerations relating to chassis layouts Power required for propulsion and acceleration. Frames and their brackets. Front axles. Steering gears. Propeller shafts and universal joints. Differential gears. Rear axles. Spiral bevel- and hypoid gear drives. Double-reduction and two-speed axles. Front drive all-wheel drive and six-wheelers. Worm-gear drive. Chain drive. Brakes. Power brakes. Types of chassis springs and their characteristics. Conventional suspension systems. Independent suspensions. Wheels and tires. Appendices. Index.

Note. The broad scope of this volume is best indicated by saying that deals with all parts of the automobile except the engine and body It is intended for use as text in engineering courses, and as reference tool by automotive engineers and designers. The theory function, and constituent materials of the various parts are discussed, but emphasis is placed on the fundamentals of design Brief historical notes trace the origin and development of each major part. The first edition was printed in 1943. The only change made in this edition is the addition of an appendix wherein are described recent developments in chassis design, particularly as regards braking equipment and rubber and air suspension systems.

KUNS RAY FOREST AND TOM C. PLUMRIDGE editors

Automobile engines. Chicago American Technical Society 1945 732 p. illus. 21 cm. $4 75 2035

Contents Internal-combustion engines. Engine troubles. Disassembling and engines. Cylinders Pistons, piston pins, and piston rings Valves. Valve-operating mechanisms. Connecting rods. Crankshafts—main bearings—flywheels. Crankcases and engine lubrication Fuel systems. Carburetors. Cooling systems. Manifold construction. Glossary Index.

—— Fundamentals of automobile chassis and power transmission. Chicago American Technical Society 1945 754 p illus 21 cm. $4 75 2035a

Contents Automobile design and construction. Car frame types. Clutches. Selective transmission. Rear axles. Front suspension—front axles—steering gears. Springs and shock absorbers. Wheels Tires. Brakes Glossary of automobile terms. Index.

—— Automobile ignition and electrical equipment. Chicago American Technical Society 1945 515 p. illus. 21 cm. $4.25 2035b

Contents: Elementary electrical principles. High-tension magneto ignition. Battery ignition system. Battery ignition maintenance and tests. Motors—starting principles. Generators. Storage batteries. Questions and answers on electrical principles. Automobile radios. Passenger car lighting. Reading wiring diagrams and using electrical test equipment. Electrical repairs. Glossary of automobile terms. Index.

—— Automobile maintenance. Chicago American Technical Society 1945 735 p illus 21 cm. $4 75 2035c

Contents: Service station operation. Motor analysis. Trucks. Reading wiring diagrams and using electrical test equipment. Wiring diagrams and data sheets on 1933–37 cars. Wiring diagrams, data sheets, and index on 1938 cars. Wiring diagrams, data sheets, and index on 1939 cars. Wiring diagrams, data sheets, and index on 1940 cars. Wiring diagrams, data sheets and index on 1941 cars. Wiring diagrams, data sheets, and index on 1942 cars. Wiring diagrams, data sheets, and index on 1943, 1944 cars. Glossary. Index.

Note: These volumes are designed for either home or classroom study by beginning service station operators and auto mechanics. They treat general construction principles briefly but the emphasis is on practical methods of maintenance and repair. Since a good deal of specific information on individual makes of cars and their equipment is included, the set will be useful also for reference. In general, this specific information is limited to automobiles manufactured from 1933 through 1942.

SOCIETY OF AUTOMOTIVE ENGINEERS INC.

Maintenance of automotive engine cooling systems. New York Society of Automotive Engineers, Inc., 1948 106 p. illus. 22 cm. $2.00 2036

Contents: Introduction. Cooling system construction, function, and operation. Driver preventive maintenance. Mechanic preventive maintenance. Trouble shooting. Index.

Note: This little manual presents in clear and concise form the basic facts regarding the construction, operation, maintenance, and repair of automobile cooling systems. The material is based on extensive tests carried out by experts in the field, and the non-technical discussions of each phase of the subject will be of practical value to automotive mechanics and the average automobile owner. Many excellent diagrams and photographs further clarify the descriptive material.

SOCIETY OF AUTOMOTIVE ENGINEERS INC

SAE handbook. 1948 edition. New York Society of Automotive Engineers Inc., 1948 877 p illus. 21 cm. $10 00. 2037

Contents (abridged): Patents, patents policy. SAE standards (new, revised). SAE standards (list). SAE officers, council members. SAE Technical Board. Technical committee personnel. Sectional committee (ASA). SAE representatives. CRC, Inc. Regulations, SAE Technical Board. Section 1 Aer parts, materials, codes. Section 2 Units, parts, fittings. Section 3 Materials, processed. Section 4 Materials, fabricated. Section 5, Screws, bolts, washers. Section 6, Tests, ratings, codes. Section 7 Transportation, maintenance. Section 8, Tools, production equipment. Section 9 Nomenclature, tolerance, conversions. Section 10, Miscellaneous. General index. Index to advertisers.

Note: A reference book for the desk of automotive and aeronautical engineers. The greater part of [illegible] consists of tabulated data on metal alloys and on machine parts. Also included are statements of officers and committee memberships of the sponsoring Society. Recommended practices and official standards of the SAE which have application in the automotive field are included, but the Society's standards and recommended practices for aeronautical engineering are not included. A new edition was scheduled for publication in 1949.

FUELS

BARKLEY, JOHN FERDINAND AND OTHERS

A guide for reducing fuel consumption in commercial plants by J F Barkley Thomas C. Chesley, and K. M Waddell. Washington D C. Government Printing Office, 1947 168 p illus 23 cm. (United States. Bureau of Mines Bulletin 466) Paper $0.50 2038

Contents: Introduction. Combustion equipment. Draft and combustion air. Instruments and controls. Pumps, traps, and valves. Cleaning and miscellaneous. Heat utilization and distribution. Prevention of heat losses. Fuel fuel efficiency program, by W W Dubbage. Example posters. Index.

Note: During World War II in order to save fuel National Fuel Efficiency Program designed to reach industrial and commercial users of fuel was initiated under the Fuels and Explosives Branch of the Bureau of Mines. The literature prepared for and used in this program is presented in this bulletin, handbook containing the educational "quiz sheets" and reference material used in the program which have permanent value in detecting waste and in lowering fuel consumption. The bulletin is published to aid in efficiency of fuel utilization in the postwar period.

FIELDNER, ARNO CARL, AND OTHERS

Bibliography of Bureau of Mines investigations of coal and its products, 1940 to 1945 by A. C. Fieldner P. L. Fisher and Marjorie B Pollock. Washington, D C. Government Printing Office, 1947 53 p 23 cm. (United States. Bureau of Mines. Technical paper 698) Paper $0 15 2039

Contents: General. Methods of sampling, analyzing, and testing. Occurrence, origin, microstructure, classification, proximate and ultimate analyses, calorific values, and fusing temperatures of ash. Physical and chemical properties of coal. Dusts and dusts. Mining. Mine water and corrosion. Preparation sizing, cleaning, and briquetting, including testing methods. Storage, spontaneous heating, and oxidation of coal. Carbonization, including testing methods. Complete gasification water-gas, producer-gas, and mixed-gas production. Hydrogenation and synthetic products. Coke, Gas, Tar light oils, and other byproducts. Combustion. Smoke abatement. Economics and statistics. Motion-picture films. Index of subjects. Index of authors.

Note: (4038) This paper lists by subject the publications concerning Bureau of Mines investigations of coal and its products issued 1940–1944. The publications listed include printed and mimeographed publications issued by the Government Printing Office or the Bureau of Mines and articles by staff members published in periodicals, journals, and books of other publishers.

FRASER, THOMAS AND WILLIAM L CRENTZ

Washing characteristics of the Pittsburgh coal in a *high-sulfur area in Greene county* Pa. Washington, D C. Government Printing Office 1946 85 p. illus. 23 cm. (United States. Bureau of Mines. Technical paper 689) Paper $0.15 2040

Contents (abridged): Situation with regard to metallurgical coal in the Pittsburgh area. Available methods of sulfur reduction. Experimental program. Sampling in the mine. Sampling at the tipple. Test procedure. Test data. Face samples. Batch samples. Tipple samples. Interpretation of data: Variations in sulfur and ash content. Reduction in sulfur by washing. Reduction in ash by washing. Effect of fine crushing on release of sulfur. Conclusions on adapting mining and preparation practices to production of low-sulfur coal. Separate handling of low-sulfur coal and high-sulfur coal. Comparison of yields by low-gravity separation and by separate handling of low-sulfur coal.

Note: The Bureau of Mines made an extensive study of the characteristics of the coal in typical area of Greene county in southwestern Pennsylvania in order to obtain more information about the nature of the sulfur known to occur in the coal of the southwestern part of the state. This portion of Pennsylvania is expected to be the main source of metallurgical fuel for the Pittsburgh industrial area in the coming years. The investigations made are described in this publication the data gathered are presented and interpreted and conclusions are given.

GAUGER, ALFRED WILLIAM

Physical chemistry and the technology of fuels. Sponsored by Phi Lambda Upsilon and

the Department of Chemistry The Pennsylvania State College. State College Pennsylvania The Pennsylvania State College 1947 114 p illus. 28 cm. (Twenty-first annual Priestley lectures) Paper $2 00 2041

Contents The composition and properties of fuels. Interconversion of solid, liquid and gaseous fuels. Gasification of solid and liquid fuels. Physical chemistry of combustion. Fuels as chemical raw materials. The nuclear energy power plant. Acknowledgements and references.

Note A brief review of present-day knowledge regarding the composition, properties, and utilization of fuels. Almost half the volume is devoted to discussion of the physical and chemical properties and composition of the major solid, liquid, and gaseous fuels. The book, which is an expansion of series of lectures presented at The Pennsylvania State College, will be primarily of interest to physical chemists.

GRISWOLD, JOHN

Fuels, combustion and furnaces. New York McGraw Hill Book Company, Inc. 1946 496 p illus 24 cm. (Chemical engineering series) $5.50 2042

Contents: Coal and coke. Petroleum and natural gas. Mixture properties of petroleum fractions. Combustion stoichiometry Temperature, enthalpy and heat of combustion. Equilibrium and kinetics. The combustion process. Manufactured gas. Gas burners. Oil burners. Stokers and pulverized coal burners. Introductory heat transmission. Furnace refractories. Flow and chimney considerations. Tube heaters. Process furnaces and kilns. Appendix of data. List of visual aids. Author index. Subject index.

Note This book offers clearly written survey of present-day fuels and the equipment for utilizing them. The volume is intended chiefly for use as textbook by undergraduate students of chemical engineering, but it is also handy outline of the subject for graduate engineers who have not specialized in fuels. Each chapter contains list of references and review exercises.

NATIONAL RESEARCH COUNCIL. COMMITTEE ON CHEMICAL UTILIZATION OF COAL DIVISION OF CHEMISTRY AND CHEMICAL TECHNOLOGY

Chemistry of coal utilization, prepared by the Committee on Chemical Utilization of Coal, Division of Chemistry and Chemical Technology H. H. Lowry chairman New York John Wiley & Sons Inc. 1945 2 v illus. 22 cm. $20 00 per set. 2043

Contents (abridged) Volume The origin of coal, by Thomas A Hendricks. Coal petrography by Gilbert H. Cady Calorific value of coal, by W A Selvig and F H. Gibson. Hardness, strength, and grindability of coal, by H. F Yancey and M. R. Geer Plastic, agglutinating, agglomerating, and swelling properties of coals, by R. E Brewer Chemical constitution of coal—as determined by halogenation reactions, by J F Weiler. Chemical constitution of coal—as determined by reduction reactions, by J F Weiler Forms of sulfur in coal, by Gilbert Thiessen. Composition and origin of the mineral matter in coal, by Gilbert Thiessen. The cleaning of coal, by H F Yancey and M R Geer Changes in coal during storage, by L. D Schmidt Vacuum distillation of coal, by H. C Howard. Industrial coal carbonization, by Fred Denig. The physical properties and reactivity of coke, by Martin A. Mayers. Volume Gas from coal carbonization, by Alfred R. Powell Removal of sulfur compounds from coal gas, by Herbert A. Gollmar Recovery of ammonia, cyanogen, pyridine and other nitrogenous compounds from industrial gases, by William H. Hill. Light oil from coke-oven gas, by William L. Glowacki. Utilization of coal gas, by Louis Shnidman. The chemical nature of coal tar by E. O. Rhodes. Direct generation of electricity from coal and gas (fuel cells) by H C. Howard. Producers and producer gas, by B J. C. van der Hoeven. Water gas, by Jerome J. Morgan Hydrogenation of coal and tar by H H. Storch. Synthesis of hydrocarbons from water gas, by H. H Storch. Methanol synthesis from water gas, by L. L. Hirst Book index. Name index. Subject index.

Note A collection of forty papers written by thirty-five specialists, several of hom are associated with the Koppers Company the Mellon Institute, the U S. Bureau of Mines, and the Carnegie Institute of Technology Most of the papers are based on the literature published through 1939 although there are some references to 1942 and 1943 publications. The literature pertinent to the subject of each paper is cited in footnote references. The work is intended primarily for fuel chemists.

SHNIDMAN LOUIS, editor

Gaseous fuels a digest of their properties, behavior and utilization. New York American Gas Association 1948 368 p illus. 29 cm. $7.50 2044

Contents: Introduction. The gas laws. Fuel gases. Physical measurements. Some components of fuel gases. Typical uses of gas analyses. Atmospheric gas burners. Interchangeability of fuel gases. Controlled furnace atmospheres. Purging principles and practice. Flue gases. Deposits in distribution systems, housepiping, and appliances. Air and related atmospheres. Appendix. Index.

Note A comprehensive compilation of technical data which will be of practical value to manufacturers and users of all types of fuel gases, and to the gas industry at large. Throughout the volume emphasis is placed on those topics and problems which are of chief concern to large-scale users of fuel gases. The manual is thoroughly revised and enlarged version of an earlier work entitled *Fuel-flue gases* 1940.

STEINER, KALMAN

Fuels and fuel burners New York McGraw Hill Book Company Inc., 1946 393 p. illus. 22 cm. $4.50 2045

Contents. Introduction—the fuel industry Formation and occurrence of natural and manufactured fuels. Elements of combustion. Coal composition and classification. Coal fuel. Hand firing Coal stokers. Stoker installation and operation. Fuel oils. Oil burners. Oil-burner installation and operation. Gas fuels Gas burners. Fuel-burner controls. Load; chimneys and draft. Heating-system control. Fans and motors; refractories. Wood fuel, by R. H. P Miller. Visual aids. Index.

Note. A useful manual intended to provide basic practical information for fuel and fuel-burner dealers, service mechanics, and anyone else interested in domestic and commercial heating problems The utilization of fuel on large scale as in electric power plants is not covered. Burning of coal is considered at greater length than the burning of gas and oil. The material is largely descriptive, but much valuable engineering data relating to combustion rates of stoker fuel, heating values of fuel oil, and the heating requirements of various types of buildings are scattered throughout the volume. There are numerous photographs and reproductions of drawings hich for the most part illustrate equipment now in use in the U S. A.

HEATING VENTILATING AND AIR CONDITIONING

ALDEN JOHN LESLIE

Design of industrial exhaust systems. Second edition New York The Industrial Press, 1948 252 p illus. 22 cm. $3.50 2046

Contents Flow of fluids. Hoods for dust control. Hoods for fume, smoke and vapor control Air flow through hoods. Pipe resistance. Piping design. Dust separators Low pressure conveyors. Centrifugal exhaust fans. Axial flow fans. Structural details and system planning. Field measurements and their interpretation. Index.

Note (4034) A manual prepared for the guidance of engineers, factory supervisors, and others responsible for the selection, design or construction of exhaust systems used in the removal of industrial dusts and fumes. The volume stresses the practical aspects of the subject but contains considerable data on air flow and other theoretical aspects. The chapters on hoods for fume, smoke and vapor control and axial flow fans have been added in this edition.

ALLEN JOHN ROBINS AND OTHERS

Heating and air conditioning by John R. Allen James H Walker and John W James. Sixth edition New York McGraw-Hill Book

Company Inc. 1946 667 p illus. 23 cm. $5.50 2047

Contents Heat and the properties of steam and air Heat losses from buildings. Methods of heating. Gravity warm-air furnace heating. Radiators, convectors, and unit heaters. Fuels and boilers. Steam heating systems. Pipe, fittings, valves, and accessories. Steam piping. Hot-water heating systems. Automatic control. General and district heating—electric heating. Air and its properties. Principles of air conditioning. Ventilating and air-conditioning systems. Fans, filters, washers, and coils. The transmission and distribution of air. Cooling and dehumidifying apparatus. The cooling and dehumidifying load. The design of an air-conditioning system. Residence air conditioning. Unit air conditioners. Industrial air conditioning. Appendix. Index.

Note. (4015) This work is an established textbook for engineering college courses. In libraries it has proved useful also as book that can be used by general readers as source of information about heating and air-conditioning systems and apparatus. The presentation is technical, but since it is written for students who are beginning the study of the subject, the mathematics employed are simple and the terminology is not difficult. This edition has not been completely rewritten, but new material has increased the number of pages by seventy-four over the 5th edition (1939) and several parts have been extensively revised.

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS

Heating, ventilating, air conditioning guide. Vol. 26 New York American Society of Heating and Ventilating Engineers 1948 1280 p. illus. 24 cm. $7.50 2048

Contents (abridged) Code of ethics for engineers. Index to technical data. Section I, Principles: Fluid flow Fundamentals of heat transfer. Air leakage. Instruments and measurements. Section II, Human reactions to atmospheric environment. Section III, Heating and cooling loads. Section IV Combustion and consumption of fuels: Automatic fuel burning equipment. Chimneys and draft calculations Section Heating systems and equipment Warm air systems. Steam heating systems and piping. Unit heaters. Pipe insulation. District heating. Panel and radiant heating. Motors and motor controls. Spray apparatus. Section VI, Air conditioning: Dehumidification by sorbent materials Air duct design. Sound control. Owning and operating costs. Section VII, Special applications: Industrial air conditioning. Drying systems. Marine heating, ventilation, air conditioning Water services. Section VIII, Installation and testing codes Catalog data section. Roll of membership.

Note: (4054) A long-established and authoritative compilation of technical data and design information which is prepared for the guidance of heating and ventilating engineers In this edition the majority of the chapters have been somewhat revised to include recent engineering developments and descriptions of new equipment. As in previous issues, collection of manufacturers' catalogues and the membership list occupy about one-third of the space. A new edition was scheduled for publication in 1949

BROWN SAMUEL P

Air conditioning and elements of refrigeration with the editorial assistance of John D Constance. New York McGraw Hill Book Company Inc. 1947 644 p. illus. 23 cm. $6.00 2049

Contents (abridged) Basic science Graphs as engineering tools Physical properties of air. Thermodynamic properties of steam. Introduction to psychrometry Water-vapor refrigeration. Properties of refrigerants for mechanical systems. Mechanical refrigeration thermodynamic cycle. Mechanical refrigeration equipment Application of refrigeration to air conditioning Air for human comfort. Heat transmission and air leakage. Calculation of heating load. Radiation heating systems, steam, and hot water Warm-air heating and winter air conditioning Calculation of cooling load Psychrometric study of air-conditioning equipment and processes. Calculations for summer air conditioning. Fluid flow Ducts and piping, design and calculations of resistance. Air distribution in conditioned space. Automatic control devices and simple systems Appendix. Index.

Note The basic principles of air conditioning and refrigeration are explained here in an elementary yet detailed way and the design of heating, cooling, and humidity control systems is thoroughly treated from the practical standpoint. The book is usable for self-instruction or reference purposes, although it is chiefly intended to be text for advanced vocational courses. The material that is included will be helpful to the maintenance man but there is no attempt to cover maintenance and repair operations. Steam tables, psychrometric tables, and answers to the chapter problems are given in the appendix. There are occasional footnote references to the related literature

HERKIMER, HERBERT AND HAROLD HERKIMER

Air conditioning New York Chemical Publishing Co., Inc., 1947 692 p illus 22 cm. $12 00 2050

Contents: Introduction. Gas laws. Physical and chemical properties of matter Change of state. Heat and heat transfer Heat transmission of building materials. Heat transmission factors in cooling. Radiant heating. Elementary thermodynamics and steam. Air and vapor mixtures Dynamics. Elements of health and comfort. Fans, ducts and air distribution. Heating load. Cooling load. Dehumidification and humidification with air washers. Spray systems and cooling towers. Drying. Cooling methods and refrigeration. Unit air conditioners. Central air conditioning systems. Authorized cooling and the by-pass system. Industrial applications. Automatic controls. Estimating costs. Appendix: Abbreviations, symbols, conversion tables Index.

Note A comprehensive manual of basic data and information useful to students of air conditioning and engineers engaged in the design, repair or selection of air conditioning equipment. Although the book is eminently practical, it does not describe actual installation procedures. An important feature is the relatively large amount of tabulated data on refrigerants, specific heats, transmission of heat, optimum temperatures for various industries, the ratings of air conditioning units and other topics of interest to the engineer.

MADISON RICHARD D editor

Fan engineering. An engineer's handbook on air its movement and distribution in air conditioning combustion, conveying and other applications employing fans 5th edition, rewritten and reset. Buffalo Buffalo Forge Company 1948 808 p 18 cm. $6.00 2051

Contents (abridged) Part I: Properties of air and air-vapor mixtures. Heat transmission. Fluid flow Air distribution. Part II: Centrifugal fans Axial flow fans. Laws of fan performance. Fan testing Sound. Fan dynamics. Fan power equipment. The jet pump. Part III: Heating Ventilation. Humidifying and dehumidifying. Cooling and refrigeration. Drying. Combustion and mechanical draft. Air cleaning. Exhausting and conveying. Part IV: Problems and selection of equipment. Multiblade ventilating fans Centrifugal fans in industry Axial flow fans. Heaters. Coolers. Air conditioners. Evaporative coolers. Air cleaning and humidifying. Appendix. General index.

Note: A standard handbook of information and engineering data on industrial fans and air flow It is designed for engineers and other technically trained persons who select fans for industrial uses or design systems in which fans are employed to move air. In preparing the present edition the work was extensively revised. Greater attention is now paid to basic engineering, and somewhat more comprehensive treatment of air conditioning has been incorporated. The numerous charts and tables have been revised and modernized with new data wherever possible. Selective bibliographies are included throughout the volume.

MANLY HAROLD PHILLIPS

Drake's heating cooling and air conditioning handbook, a reference manual and practical instruction book. Chicago Frederick J Drake & Co 1947 758 p. illus. 19 cm. $4.00 2052

Contents (abridged) Winter heating and summer cooling. Heat transfer. Evaporation and relative humidity Psychrometric tables and charts Heating and cooling loads. Ventilation, leakage, and moisture. Heating load calculation. Heating with hot water Heating with steam. Heating with warm air Cooling loads and their cal-

culation. Air filters. Air flow and pressure loss. Duct design and construction. Fan performance and selection. Oil burners. Gas burners. Coal stokers. Automatic controls. Radiant heating. Index.

Note: This book is intended for workers who are engaged in the installation and maintenance of heating and air conditioning equipment. It presents simplified, practical exposition. The computations introduced require only knowledge of simple arithmetic.

RABER BENEDICT FREDERICK, AND FRANCIS W HUTCHINSON

Panel heating and cooling analysis New York John Wiley & Sons Inc., 1947 208 p illus 22 cm. $3.50 2053

Contents Introduction. Types of heating panels. Advantages of panel heating and cooling. Disadvantages of panel heating and cooling. Radiation equations. The comfort relationship. The mean radiant temperature. Evaluation of shape factor; planar surfaces. Evaluation of shape factor; the human body Evaluation of shape factor; approximations and examples. Heat-balance equations. Simplified heat-balance equations. The equivalent conductance design procedure. Index.

Note A valuable addition to the scant literature of panel, or radiant, heating. The book contains three fairly distinct although complementary parts. In the first, the advantages and disadvantages of this method of heating and cooling are discussed in learned but non-technical terms. In the second, the design of heating and cooling panels is analyzed mathematically; and in the third, somewhat simpler procedures for design are presented. Except for the first part, which may be read by anyone who is interested, the work is definitely for persons with previous training in mathematics and engineering. It is not intended for the practical installer of heating systems, and such topics as boilers, furnaces, controls, or even the practical construction of panels, are not treated.

SHOEMAKER RICHARD WOOLSEY

Radiant heating. New York McGraw Hill Book Company Inc., 1948 306 p illus 23 cm. $4.00 2054

Contents General considerations. Structural and other advantages. Panel location in commercial buildings. Panel location in residences. The radiant heating plant. Control systems for radiant heating. Design of radiant heating systems. Installation of radiant heating systems. Radiant cooling. Process method of designing radiant heating systems. Appendix. List of symbols. Index.

Note This book explains the principles of radiant heating, states the advantages, discusses practical systems, expertly describes installation techniques, and finally reviews critically the outstanding design procedures. It is suitable for architects, builders, heating men, and homeowners who seek information on the subject. Most of the text is intelligible to non-specialists but the final chapter is technical and is intended for engineers and others who know calculus. The many illustrations include pictures of installations in process of construction. The author is consulting engineer and specialist in radiant heating.

SPORN PHILIP AND OTHERS

Heat pumps by Philip Sporn, E. R. Ambrose, and Theodore Baumeister New York John Wiley & Sons Inc. 1947 188 p illus. 22 cm. $3 75 2055

Contents Thermodynamic principles. Basic heat-pump designs. Design factors. Equipment design. Equipment selection. Defrosting cycle and system control Industrial applications. Economics of the heat pump its effect on the power-system load curve Heat pump installations Index.

Note. The heat pump is reversible refrigeration system arranged so that can be employed for either cooling or heating This book is essentially survey for engineers and technicians, although the interested layman will find that he can grasp most of the exposition. Reference lists appended to the chapters constitute well-selected bibliography of the subject.

STROCK CLIFFORD

Heating and ventilating's engineering data book selected tables and charts for supplying engineers and contractors with essential data on the design, operation and maintenance of equipment and systems for air conditioning, refrigeration piping heating air sanitation and ventilation in buildings. New York The Industrial Press 1948 570 p illus 28 cm. $7 00 2056

Contents: Heat and moisture in air Fuels and combustion. Piping. Air handling and ventilation. Heating and heat transmission. Cooling and air conditioning. Motors and drives. Contract law Mathematical data and drafting room standards.

Note A useful addition to the reference books in the field. It contains less material than some of the older handbooks; but as might be expected in new work, it presents data on number of topics that are not covered in them. Many of the graphs and tables are larger than usual in size and are therefore somewhat easier to consult. The fact that the index contains about 1,000 entries indicates the variety of information in the book.

ZIMMERMAN OSWALD THEODORE, AND IRVIN LAVINE

Industrial Research Service's psychrometric tables and charts. Dover, N H. Industrial Research Service 1945 162 p illus. 22 cm. U.S. $7 50 foreign countries $8.25 2057

Note Data on the properties of dry air and air-water vapor mixtures under pressure of 29.921 inches of mercury are presented in thirty-two tables and twenty-two charts. The range of temperatures is — 100 to 1000° F Most of the data represent original calculations by the authors In addition to the tables and charts there are short preliminary chapter on the fundamental principles and formulas pertaining to the behavior of air and air-water vapor mixtures, and another chapter of problems designed to illustrate the use of the tables and charts

REFRIGERATION

AMERICAN SOCIETY OF REFRIGERATING ENGINEERS

The refrigerating data book refrigeration applications volume. Second edition. New York American Society of Refrigerating Engineers 1946 683 p illus 24 cm. U.S., $6.00 foreign countries $6.50 2058

Contents (abridged) Section I, Frozen foods: Theories and methods of quick freezing, by Clarence Birdseye. Freezing of meats, by John H. Rumbaugh(?). Section II, Cold storage practice: Egg storage, by O. F Stewart. Cold storage of furs and fabrics, by C. A. Aspinwall. Refrigerator cars, by D. F Fisher Section III, Refrigeration in food manufacture. Milk plants, by E. H. Parker. Bakery refrigeration by W H. Cathcart. Section IV Refrigerated food distribution Refrigerated trucks, by A. F Sawyer Display of fresh foods, by J E. Mercer. Controlled atmospheres, by R. M. Smock. Section Low temperature applications: Low temperature test equipment, by W J Aulenbrock. Stratochambers, by J. C. Bergdoll, Jr. Section VI, Industrial applications of refrigeration Skating rinks, by H. R Carpenter Dry ice manufacture, by J W Martin. Section VII, Comfort air conditioning: Department stores, by C. S Leopold. Airplanes, by J C. Ross. Section VIII, Industrial air conditioning: Laboratories and testing, by C. W Rees and F L. Wettendorf. Rayon manufacture, by L. L. Lewis. Index. Advertisers.

Note. A comprehensive guide to the methods and techniques of refrigeration as they are applied in wide variety of fields. Particular attention is given to the use of refrigeration in the food processing industry but other widely diversified applications, such as in the preparation of blood plasma, oil refining, air conditioning of buses, etc are discussed No attempt is made to cover refrigeration theory equipment and machinery topics which are discussed at length in companion volume, *Refrigerating data book. Basic volume* sixth edition, 1949 In the present volume each chapter has been prepared by refrigeration expert and in all cases bibliographies are included. A directory of refrigerating equipment manufacturers is appended.

EMERICK ROBERT HENDERSON

Basic refrigeration and air conditioning. New York Prentice-Hall, Inc., 1948 259 p illus. 24 cm. $5.00 2059

Contents: Terms and definitions. Refrigerants and how they act. Refrigeration by direct expansion. Refrigeration by ammonia and brine. Refrigeration by ammonia absorption. Refrigeration by the steam-jet system. Spray ponds and cooling towers. Cold storage. Making ice—both wet and dry. Air conditioning—ways and means. Calculating job. Fans and ducts. Cabinet coolers. Refrigeration and air conditioning at sea. The heat pump. Making wiring. The trouble shooter's chart. Bibliography Index.

Note A well-written, practical text which was originally developed as an aid in training personnel of the United States Armed Forces. It is suitable both for use in courses organized at the vocational school level and as self-instruction guide. The terminology of the field and the basic theories are covered in the preliminary chapters, after which the space is devoted entirely to descriptions of refrigeration equipment and calculations that must be made in designing or selecting refrigeration systems. The chapters are supplemented by review questions, most of which are designed to illustrate practical refrigeration problems. The bibliography is unusually full for book of this kind, and the entries are annotated.

JORDAN, RICHARD CHARLES AND GAYLE B PRIESTER

Refrigeration and air conditioning. New York Prentice-Hall, Inc., 1948 512 p illus. 24 cm. $8.00 2060

Contents: Part I, Introduction The history of refrigeration. Basic refrigeration cycles and concepts. Review of thermodynamics. Part II, Refrigeration cycle analysis and compression refrigeration machines: Thermodynamics of vapor refrigeration. Refrigerants. Air-cycle, ejector, and centrifugal refrigeration, and the heat pump. Compression refrigeration machines Part III, Fluid flow heat transfer psychrometrics, and their refrigeration applications: Fluid flow and heat transfer Psychrometrics. Cooling-load calculations. Condensers and evaporators. Refrigeration piping. Part IV Advanced refrigeration topics: Multiple evaporator and compressor systems. Refrigeration control. Absorption refrigeration and chemical dehumidification. Low-temperature refrigeration. Part Refrigeration applications: Applications of refrigeration. Air conditioning. Food preservation. Appendix. Answers to problems. Index.

Note: Primarily text for senior students in college engineering courses, but one which is thorough enough to be of value for reference and review purposes by the practicing engineer Although fundamental theory and principles are stressed, practical applications and descriptions of commercial apparatus are closely integrated with the theoretical aspects of the subject. A review of basic thermodynamics is included, but the treatment requires that the student have sound background in physics and mathematics. Problems and brief bibliographies are given at the end of most chapters. There are numerous tabular and graphical presentations of useful engineering data.

MAGNUS EDWARD R., AND GRACE D MARLOTT

The refrigeration serviceman's manual. Technical adviser Franklin P Mason Illustrated by John Bayer and John J Rhoades. Chicago Wilcox & Follett Co., 1948 688 p. illus. 19 cm. $5 00 2061

Contents (abridged) Section I, The refrigeration system: Parts that make up the refrigerating system. Fundamental principles and theory of refrigeration. How the refrigerating system works. Temperature-pressure relations in the refrigerating system. Refrigerant lines and fittings. Section II, Major service operations: Refrigerants. Condensers. Receivers. Strainers and dryers. Low-pressure controls Compressors. Section III, Minor service operations Section IV Shop operations. Shop layout and equipment Overhauling compressors. Overhauling condensers. Servicing motors. Household cabinet refinishing and repair Section Sealed units: Servicing the sealed unit. Absorption and adsorption refrigerating systems. Appendix. Tables. Glossary Index.

Note: Most of this book is devoted to very detailed explanations of practical operations in the maintenance and servicing of refrigerators, particularly household refrigerators. The section on shop operations is especially noteworthy Both electrically-driven and gas-fired types are considered. A peculiarity of the treatment is that specific makes of refrigerators are not described, nor are manufacturers' cuts used as illustrations.

MANLY HAROLD PHILLIPS

Drake's refrigeration service manual an instruction and reference book covering maintenance, trouble shooting and repair domestic and commercial systems. Chicago Frederick J Drake & Company 1948 317 p illus 19 cm. $2 00 2062

Content Mechanical refrigeration. Compressor construction. Refrigerant control valves and evaporators. Condensers and connections. Temperature and pressure controls. Multi temperature systems. Temperature and pressure measurements. Tubing lines for refrigerants. Removing water air and dirt. Adding and removing refrigerant. Adding and removing oil. Compressor tests and service. Valves, evaporators and condensers. Cycling control service. Trouble shooting. Absorption refrigerators. Index

Note A vocational school text, and handbook for repairmen. Practical methods for repairing electrical refrigeration, both of the household type and those found in small commercial establishments such as soda fountains and flower shops, are covered in detail. Both the descriptive text and illustrations treat the subject in generalized way and individual makes and models of refrigerators are not dealt with in particular. The chapter on trouble-shooting contains series of twenty-three tables devoted to the causes and remedies for each recognized symptom of faulty operation.

MOTZ, WILLIAM HARRISON

Principles of refrigeration a comprehensive treatise on fundamental principles of operation of ice making and refrigerating machinery Third edition, revised. Chicago Nickerson & Collins Co 1947 666 p. illus 24 cm. $8.00 2063

Contents (abridged) Elementary refrigeration systems. Fundamental units and physical laws Refrigerating media. The ammonia compression system. Absorption and other systems Heat transmission in insulation and apparatus. Distribution of refrigeration Automatic refrigeration systems. The manufacture of ice. Cold storage of commodities. Cooling and conditioning of air Erection and testing of apparatus. Operation and care of apparatus. Frozen surveys for refrigerating plants. Economics of refrigeration. Index.

Note: An introduction to the principles of refrigeration and to the operation of refrigerating plants, especially plants for ice-making and cold storage. It is designed for the instruction of engineers and operators who have practical interest in the subject. The exposition is unusually detailed, and the text is supplemented by large amount of tabular and graphic reference data. Apparently more material has been dropped from the revised version of the third edition than has been added, but the additions include the chapter dealing with cold storage buildings, the chapter dealing with production of clear ice, and information on such topics as the Freon refrigerants. The book has been reset so that the average page now contains nearly 15 per cent more matter. The mechanisms of household refrigerators and modern developments in the commercial field, such as the manufacture of ice cubes and flake ice, are not covered.

RABER, BENEDICT FREDERICK AND FRANCIS W HUTCHINSON

Refrigeration and air conditioning engineering. New York John Wiley & Sons, Inc. 1945 291 p. illus. 23 cm. $4.50 2064

Contents: Thermodynamic principles. Fundamental cycles of vapor refrigeration systems. Complex compression cycles for single-load system. Analysis of actual cycles. The absorption cycle. Steady state heat transfer Periodic heat transfer. Transient heat flow Psychrometric principles. Supply state of conditioned air Psychrometric processes. Process combinations. Design state and design volume. Ventilation systems. Fan performance and selection. Airway design.

Note This work, intended as text for advanced students, and as reference tool for practicing engineers, is treatment of fundamental principles rather than description of actual practices and equipment. The use of graphical methods is stressed both in the presentation of data and in the solution of refrigeration-cycle

problems. There is some material on comparatively new developments such as radiant heating, the heat pump, and porous-cell humidifying. Problems and brief reference lists are furnished at the end of each chapter and there is an index.

VENEMANN, HENRY GERALD

Refrigeration theory and applications a text book on fundamental principles involved in the process of refrigeration with applications to assist the student and engineer to design, maintain and operate plants. Second edition Chicago Nickerson & Collins Co 1948 336 p illus. 23 cm. $4.00 2065

Contents: The compression refrigeration system or electric refrigeration. Energy transformations. Refrigerant charts and their uses. Property changes during test. Calculations of results of sample test. Analysis of actual plant performance. Performance of compressors. Instructions for starting plants in operation. Refrigerants. Miscellaneous methods of refrigerating. Air as primary refrigerant. Air and water vapor mixtures. Plant analysis via theoretical cycle. Methods of accommodating variable loads. Heat exchangers for cooling air. Heat exchangers for cooling liquids. Heat exchangers—condensers. Automatic controls. Estimating plant loads. Specifications for refrigeration plant. Index

Note: (4080) A practical but relatively thorough exposition that is intended for use in college and vocational school courses and in self instruction. Improvements in the second edition include new and smaller format, revision of the first thirteen chapters incorporating much new material, the inclusion of an index, and the inclusion of paged table of contents. Basic principles of mechanical refrigeration and details of refrigeration plant operation and servicing are covered. Review problems are given with each chapter and useful data regarding the properties of refrigerants and compressor operation are tabulated throughout the volume. The pressure-enthalpy charts are now contained in cover pocket.

WOOLRICH WILLIS RAYMOND AND LUIS H. BARTLETT

Handbook of refrigerating engineering. Third edition New York D Van Nostrand Company Inc. 1948 730 p illus. 19 cm. $8.50 2066

Contents. Fundamental units, definitions, conversion factors, and abbreviations. Primary refrigerants. Primary refrigerant charts and tables of thermodynamic characteristics. Nomographs for refrigerants. Reciprocating compressors. Centrifugal refrigerant compressors. Jet compressors. Condensers. Refrigerating cycles. Absorption refrigeration. Secondary refrigerants. Heat transfer. Power drives and economics. Testing the refrigerating plant. Instruments and controls. Atmospheric water cooling. Filters and water softeners. Ice and ice making. Cold storage food preservation and fur storage. Freezer storage. Quick freezing of foods. Locker storage, economics and design factors. Storage house construction. Refrigeration of meat, fish and poultry. Refrigeration in the dairy industry. Refrigeration applied to air cooling. Marine refrigeration. Lubrication. Fans. Pumps and injectors. Piping and tubing details and data. Accident prevention and safety in refrigeration. Index.

Note (4081) The third edition of this handbook, the first to appear under joint authorship, has not only been greatly enlarged but entirely rewritten, consequent upon the tremendous strides made in the field of refrigerating engineering since the publication of the second edition in 1938. Frozen vegetables, fruits, and meats, freezer locker plants, and air conditioning are the most notable of the topics in which development has been rapid and which the new edition covers in detail. The book is an up-to-date manual of text, figures, and tables for the engineer concerned at any point with refrigeration.

WOSTREL, JOHN FRANK, AND JOHN G PRAETZ

Household electric refrigeration including gas absorption system. Second edition. New York McGraw Hill Book Company Inc., 1948 458 p illus. 24 cm. $4.50 2067

Contents. Simple explanation of refrigeration theory. Compression systems for household refrigeration units. Absorption systems for household refrigeration units. Control devices. Equipment for installation service and testing. Installation instructions for compression types of refrigeration machines. Installation instructions for absorption type. Service operations and adjustments. Service complaints—diagnosis and remedy. Motors. Food preservation. Heat transfer and insulation. Appendix. Index.

Note (4082) A practical manual for refrigeration servicemen and other persons interested in the operation, construction, adjustment, and repair of household refrigerators. The explanation of refrigeration theory given in the first chapter is intended for persons without previous technical training in the field. The remainder of the book is largely descriptive and is intended to assist its readers in understanding and repairing the refrigeration systems used in household refrigerators. The book is especially useful in relation to the repair and maintenance of such refrigerators produced in the U. S. A. before World War II. The changes made in preparing the present edition are not extensive, but they do include new or expanded discussions of new devices such as capillary tubes for refrigerant control. Also service instructions for Copeland, Philco, and Stewart-Warner refrigerators, which were introduced to the market after the first edition of the book was prepared, are now included.

MINING ENGINEERING

GENERAL

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS

Seventy-five years of progress in the mineral industry 1871–1946 including the proceedings of the seventy-fifth anniversary of the American Institute of Mining and Metallurgical Engineers and World Conference on Mineral Resources March 17th 18th 19th, 1947 edited by A B Parsons. New York The American Institute of Mining and Metallurgical Engineers 1947 817 p illus. 24 cm. $6.00 2068

Contents: Foreword, by the editor Introduction, by Louis S. Cates. Seventy-five years of progress: In mining geology by L. C. Graton. In metal mining, by L. Eaton. In ore dressing, by A. F Taggart. In smelting and leaching of ores, by F Laist. In iron and steel, by C. D King. In nonferrous metallurgy by W M. Peirce. In bituminous coal mining, by H. N Eavenson. In anthracite industry by Committee, C. Evans, Jr chairman. In petroleum, by E. L. DeGolyer. In the nonmetallics, by O. Bowles In mineral production—the statistical record, by E. W Pehrson. In mineral industry education, by T T Read. History of the Institute, by A. B. Parsons. Officers of the Institute, 1871–1947 Proceedings of the 75th anniversary celebration and World Conference on Mineral Resources: The story of the meeting. Seventy-five years of achievement by the A. I. M E. in the mineral industry by C. F Kelley The mineral position of the United States, by J A. Krug. Iron ore and the steel industry by C. M. White. International aspects of the petroleum industry, by Sir W Fraser Copper lead and zinc mining in the future, by C. H Crane. The future of gold in world economy by P M. Anderson. Tariffs, cartels, and the mineral industry by W L. Thorp. South American minerals in the future world economy by P Bebiola. World coal resources, by C. A. Carlow The philosophy of international atomic energy control, by J. M Hancock. The role of the engineer in the development of atomic energy by P C Keith. Application of atomic energy to industry by H. A. Winne and B R. Prentice. Petroleum and natural gas, uses and possible replacements, by R. E. Wilson and I. K. Roberts. Metals and alloys of the future, by Z. Jeffries. Techniques of mineral exploitation of the future, by L. S. Cates and H. Bancroft. American mining enterprise in foreign countries, by R. Bradon. Official delegates and representatives. Committees for the Conference, and Institute officers, 1946. Index.

ASH SIMON HARRY AND E. W FELEGY

Analyses of complex mixtures of gases application to control and extinguish fires and to prevent explosions in mines tunnels, and hazardous industrial processes. Washington D C Government Printing Office, 1948 202 p. illus. 23 cm. (United States. Bureau of Mines. Bulletin 471) Paper $0 75 2069

Contents (abridged) Part I: Introduction. Explosive limits and explosive range. Critical gas mixture and critical gas-mixture value. Note-limit mixture and nose limit. Critical oxygen value. Calculation of factors affecting explosibility of complex-gas mixtures. Use of charts to determine explosibility of complex gas-inert gas-air mixtures. Graphic method of determining minimum volume of inert gas necessary to render given atmosphere incapable of forming explosive mixtures with air Use of mixture of air and inert gas as diluent. Part II, Examples of practical applications of data relating to explosibility factors of mixed gases: An anthracite mine fire. Fire in inaccessible old mine workings. Explosion caused by fuel gas in manufacturing plant. Appendix. Bibliography

Note: Complex mixtures of gases encountered in mines, tunnels, and industrial processes sometimes present imminent danger from explosions. The purpose of the report is to point out what the mine-management official, the safety engineer and the chemist can do to utilize analyses of complex gas mixtures as basis for safe procedure to (1) control and extinguish fires in mines, tunnels, and industrial plants and (2) prevent explosions but dealing with explosive mixtures and sources of ignition. For those interested in the technical aspects of the subject, the necessary theory and detail relating to the derivation of the formulas are given. T show the application of the material presented, some typical examples are calculated and discussed. Various relations between composition and explosibility are graphically shown in ten folding charts which come with the bulletin.

FELEGY E W., AND OTHERS

Acid mine water in the anthracite region of Pennsylvania, by E. W Felegy L. H. Johnson, and J Westfield. Washington D C. Government Printing Office, 1948 49 p illus 23 cm. (United States Bureau of Mines. Technical paper 710) Paper $0 15 2070

Contents: Introduction. Description of laboratory equipment. Analytical procedure. Methods of sampling. Chemical analysis of surface water. Determination of average pH. Graphic method of determining average pH Stream-flow data. Chemical analyses of mine-water discharges. Cost of neutralization. Summary Bibliography

Note: Acid drainage from mining operations in the anthracite region of Pennsylvania is problem in stream pollution confronting communities situated along the streams of the region, and complaints have been directed against the anthracite mining industry concerning the effects of acid mine drainage on the receiving streams. The object of the study presented in this paper was to determine the effect of acid mine drainage on the receiving streams and to indicate the effect on the streams of any program for mine-flood prevention or control. Included in the report are detailed analyses of water samples collected by Bureau of Mines personnel in 1941 and 1944.

FORRESTER, JAMES DONALD

Principles of field and mining geology New York John Wiley & Sons Inc. 1946 647 p. illus. 22 cm. $7.00 2071

Contents: Part I, Recognition of geologic phenomena: Foreword. Rocks and geologic structures. Field criteria for recognition of geologic structures. Phenomena of economic mineral deposits. The correlation of geologic phenomena. Part II, General field-survey practices and procedures: Foreword. Field equipment exclusive of surveying instruments. General survey procedures Survey methods and instruments. Part III, Special field techniques of mining geology: Foreword. Surveying and mapping procedures. Sampling. Ownership studies and mining claim locations. Prospecting and development practices. Part IV, The interpretation and use of field data: Foreword. Library and laboratory research and the preparation of maps, models, and illustrations. The use of prepared maps and illustrations and the correlated analysis of the geological problem. Interpretations, analyses, and conclusions Bibliography of selected references. Index.

Note: The intention of this useful work is to describe the geological techniques necessary for determining the occurrence of economically valuable mineral deposits. Procedures described are those in current use and include most of the various geophysical prospecting techniques. There are numerous photographs, diagrams, and tables. The work is useful to practicing geologists for reference purposes and to students as text for learning how to record and interpret observations, and to present conclusions effectively

McELROY, GEORGE EDWARD

Design of injectors for low-pressure air flow Washington D C Government Printing Office, 1945 50 p illus. 23 cm. (United States Bureau of Mines Technical paper 678) Paper $0 10 2072

Contents: Introduction. Experimental confirmation of Weeks' theory Performance of injectors Injector types. Cylindrical injector Venturi injector Characteristic performance curves. Example of performance calculations. Limiting pressure and limiting-efficiency curves. Design of injectors: Throat momentum less than, or equal to, jet momentum. Stream momentum equal to jet momentum. Resistance ratio. Maximum capacity Characteristic-ratio chart of injector performance. Design chart. Saccardo system of tunnel ventilation. Operating characteristics. Compressed-air jets. Compressed-air-operated injectors. Laws of injector performance Conclusions Nomenclature.

Note. This publication presents and discusses methods of designing injectors (jet pumps) for low-pressure air flow according to the theory of Professor W S. Weeks, with special reference to their use in mine and tunnel ventilation. Data resulting from observations and experiments are presented. The major difficulty in the application of the theory to the compressed-air-operated injectors used in mine ventilation lies in calculating the momentum of compressed-air jet. Means are given of facilitating this operation.

McKINSTRY HUGH EXTON

Mining geology with sections by Stanley A. Tyler E. N Pennebaker and Kenyon E. Richard New York Prentice-Hall Incorporated, 1948 680 p illus. 23 cm. (The Prentice-Hall geology series Norman E A Hinds, editor) $10 00 2073

Contents: Part I, Assembling geological data. Geologic mapping. Sampling ore and calculating tonnage. Drilling. Geophysical investigations. Laboratory methods. Correlating data. Part II, Geological principles of ore-search and ore appraisal The use of fact and theory Guides to ore—targets and leads Physiographic guides. Mineralogical guides. Stratigraphic and lithologic guides. Fracture patterns as guides. Contacts and folds as guides. Dislocated orebodies. Persistence of ore in depth. Part III, Application to specific phases of mining: Field exploration Examining and developing prospects. Valuing mining properties. Geological work at an operating mine. Engineering geology in mining. Writing and reading reports. Part IV Technological characteristics of ores. Amenability of ore to treatment. Marketable forms of metals and ores Appendices. Glossary of mining and geological terms.

Note A well-written comprehensive treatise on the application of geological principles and techniques to the locating, appraising, and mining of mineral deposits It is intended as a guide and reference manual for the mining geologist in the field, who may not have access to other pertinent literature It thus includes, in summarized form, basic information concerning mineral rights, the occurrence and characteristics of minerals, methods of evaluating mines and ore deposits, preparation of reports, location of smelting and reduction plants, etc. Since the volume is written for the professionally trained reader the fundamental principles of structural geology and ore deposits are only briefly reviewed The references scattered throughout the text form an extensive bibliography of the subject.

PAUL, RODMAN WILSON

California gold the beginning of mining in the Far West. Cambridge Harvard University Press, 1947 380 p. illus 22 cm. $4 50 2074

Contents The setting. The new age begins The great migration. Fundamentals and teachers. From an adventure to a business mining, 1848–1851. Camps, cabins, claims, and chimneys, 1848–1858. The three sections: ...sters and men, 1848–1860 Basic conditions for the transitional era. Towards a new economy 1851 1860 I—Rivers and veins. Towards a new economy: 1851–1860 II—Deep diggings and the water supply Greater California. The regulation of society 1848 1873. The law of the miners, 1848–1873. The survival of the fittest, 1860–1873 The distant prize 1860–1873. Maturity 1860–1873 From Sunday carnival to labor war 1857 1873 Epilogue. Appendix A Gold production. Appendix B Wages. Appendix C: Note on sources. Index.

Note Between 1848 and 1873 mining in California changed from the desperate adventure of the Gold Rush to an organized, stable industry Simple placer mining gave way gradually to large-scale river mining, lode-mining, and deep mining operations. California society based simply on the necessity for crime control and claim regulation, took on a more complex structure with the growth of the new cities and the advent of women and children into community life. The author describes these technical changes in mining and the economic and social changes that molded California during these years. The book is an excellent, well-documented example of scholarly writing. Even though it sticks to facts, it is as fascinating as some of the romantic accounts of the same subject.

YOUNG, GEORGE JOSEPH

Elements of mining Fourth edition. New York McGraw Hill Book Company Inc., 1946 755 p illus. 23 cm $6.50 2075

Contents Introduction Prospecting. Boring. Drilling for blasting purposes. Rock breaking. Blasting rock. Transportation and hoisting Mine drainage. Ventilation and illumination. Support of mine workings. Open-pit mining. Alluvial mining. Development. Underground methods Mine organization and operation. Mine accounting Accidents and miners' diseases. Examination of mineral deposits. Index.

Note. (4094) An established text well known to American mining engineers and students. The book provides a comprehensive view of the mining field, and offers a great deal of useful material compressed into a clearly written and well-balanced treatment. Coal mining principles and practices as well as those of metal mining are included, and the relation of geology to mining is emphasized wherever possible. Mining costs and cost analyses also are presented. The fourth edition covers developments in mining from 1932 to 1945 and contains minor revisions, among which are the rewritten, modernized sections on explosives.

PETROLEUM

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Structure of typical American oil fields a symposium on the relation of oil accumulation to structure. Volume III edited by J V Howell. Tulsa Okla. American Association of Petroleum Geologists, 1948 516 p. illus. 24 cm. $4 50 2076

Contents Gilbertown field, Choctaw County Alabama, by A. M. Current Fouke oil and gas field, Miller County Arkansas, by C. B. Schwartz Geology of Aliso Canyon field, Los Angeles County California, by Claude E. Leach. Cymric oil field, Kern County California, by J. H. McMasters. Geology of Edison field, Kern County California, by J H. Beach. Norman Wells oil field, Northwest Territories, Canada, by J S. Stewart. Gramp field, Archuleta County Colorado, by W A. Waldschmidt. Rangely oil field, Rio Blanco County Colorado by W T. Pickering and C. L. Dorn. Marine pool, Madison County Illinois Silurian reef producer by Heinz A. Lowenstam. Omaha pool and mica-peridotite intrusives, Gallatin County Illinois, by R. M. English and R. M. Grogan. Augusta field, Butler County Kansas, by George F Berry Jr and Paul A. Harper Geneseo uplift, Rice, Ellsworth, and McPherson Counties, Kansas, by Stuart K. Clark, C. L. Arnett, and James S. Royds. Kraft-Prusa oil field, Barton County Kansas, by Robert F Walters and Arthur S Price. Creole field, Gulf of Mexico, coast of Louisiana, by Theron Wasson. Deep River oil field, Arenac County Michigan, by Kenneth K. Landes. Dundee oil field, Monroe County, Michigan by George D Lindberg. Arcadia-Coon Creek pool, Oklahoma and Logan Counties, Oklahoma, by George E. Carver Jr. Cumberland oil field, Bryan and Marshall Counties, Oklahoma, by Ira H Cram Geology of West Edmond oil field, Oklahoma, Logan, Canadian, and Kingfisher Counties, Oklahoma, by Robert Malcolm Swesnik. Apco field, Pecos County Texas, by Samuel P Ellison, Jr Quitman oil field, Wood County Texas, by E. R. Scott. Talco oil field, Franklin and Titus Counties, Texas, by E. A Wendlandt and T H Shelby Jr. Rose Hill oil field, Lee County Virginia, by Ralph L. Miller Steamboat Butte oil field, Fremont County Wyoming, by H. E. Barton. Index.

Note Volumes I and II of this work were published in 1929. The present volume is devoted to descriptions of fields that are unusual

either in size, structure, method of discovery location, or significance. The newer aids to exploration and exploitation such as electric logging, gamma-ray logging, and the deeper drilling techniques are covered. Each paper is the contribution of one or more experts intimately acquainted with the particular field described. The work is intended for professional petroleum geologists.

BELL, HUGH STEVENS
Oil shales and shale oils. New York D Van Nostrand Company Inc., 1948 157 p. illus 23 cm. $4 00 2077

Contents: Geographical distribution and history of exploitation. Characteristics of shale and shale oils. Mining—open-cut methods. Mining—underground. Safety in mining operations. Preparation of shale rock. Retorting. Refining. Economics. Author index. Subject index.

Note The world' known deposits of oil are gradually becoming depleted and new sources are not being discovered fast enough to maintain adequate oil reserves. Accordingly in many countries including the United States, there has been resurgence of interest in the commercial possibilities of extracting oil from oil bearing shale rocks. The present volume describes the technical and economic problems connected with the exploitation of oil shales and discusses the methods that are being developed to solve them. References to the pertinent literature are included. The work is intended primarily for mining engineers and mineral economists.

FUCHS WALTER M
When the oil wells run dry Dover N H. Industrial Research Service, 1946 447 p illus. 21 cm. U.S., $5.50 foreign countries, $6 10 2078

Contents Oil through the ages. The haves and the have-nots. Uncle Sam's gigantic oil business. When the oil wells run dry. Science—oil man's partner. Man-made petroleum The wave of the future. Index.

Note: Intended as general introduction to the petroleum industry, this volume presents enough facts on the social, political, and scientific aspects of the subject to make it valuable for reference purposes as well as for its main story. There is much interesting information on the geological origin of oil, on oil wells and oil fields. Statistics are given concerning the chief sources of petroleum, markets, prices, taxes, and profits. Conservation practices, prorations, and the various methods used in oil prospecting and in working the wells to the best advantage are discussed, as is the production of petroleum from the hydrogenation of coal and from other synthesizing processes. There are few bibliographical references and miscellaneous notes at the end of each chapter.

JONES PARK J
Petroleum production. New York Reinhold Publishing Corporation, 1946–48 5 v illus. 24 cm. Vol. I, $4.50 Vol. II, $4.50 Vol. III, $4.50 Vol. IV $5.00 Vol. V $6 00. 2079

Contents (abridged) Volume I, Mechanics and production—oil, condensate, natural gas Characteristics of pay and sampey Permeability of linear and radial systems. Application of electric logs. Separator samples and equilibrium constants. Invasion factors and patterns. Displacement of condensate by cycling. Author index. Subject index. Volume II, The optimum rate of production: The maximum efficient rate of production. Interest factors. Economic limits for wells and reservoirs. The optimum for uniform rates of depletion. The optimum for variable rates of depletion. Index. Volume III, Oil production by water Injection of water. Migration of oil. Radial reservoirs. Impermeable wedges Linear reservoirs Bottom water Index. Volume IV Condensate production and cycling Injection into rich gas. Injection into water Displacement and expansion. Maximum efficient rate. Index. Volume Oil production by gas and flooding Displacement of oil by gas. Separation and plant extraction. Pressure maintenance with gas. Oil recoverable by flooding. Economics of flooding. Index.

Note. In this valuable work the geological and hydromechanical knowledge that is useful in the management of oil and natural gas fields so that maximum recovery will be obtained is brought together, interpreted, and summarized. The work is written on the professional level and is intended for geologists, conservation officials, and other persons who are concerned with the management of petroleum production. It is based on the periodical literature and on the author's own experience. Many original tables and graphs are included, and references are given to the related literature.

KINGSTON BENSON M
Acidizing handbook a treatise on the application of acid to oil wells. Houston Tex. Gulf Publishing Company 1947 116 p illus. 21 cm. $2.50 2080

Contents (abridged) Introduction. The chemistry and geology of treatment. Treating acid. Special types of treating solutions. The preparation of wells for treatment. Mechanics of treatment—generalities—the general types of treatment—selective acidizing—packers and liners. The relation of salt water to treatment. Producing the well after treatment. Acidizing gas wells. Re-treatment and stage treatment. Other uses of muriatic acid in the field. Computations in acidizing. Appendix: Bibliography Capacity of casing. Capacity of open hole. Capacity of annular space between tubing or drill pipe and open hole or casing in gallons per linear foot. Muriatic acid data. Mixture figures for treatment acids. Hydrometer conversion data and pressure exerted by different weight brines.

Note A practical survey of the potentialities and techniques of acidizing. Although the discussions are rather detailed, the book is intended more for beginners in the work, or for persons engaged in other branches of petroleum production who need general information on the subject, than for specialists. This edition is considerably revised and enlarged in comparison to the first edition, Houston, Texas, 1936. The bibliography covers the literature published 1937–1945, and supplements Fitzgerald and Gundelsperger's *Bibliography on the acid treatment of oil wells*, in American Institute of Mining Engineers, *Transactions*, vol. 123 p. 59–61 1937

ROGERS WALTER FRANCIS
Composition and properties of oil well drilling fluids. Houston Tex. Gulf Publishing Company 1948 525 p illus 23 cm. $8 00 2081

Contents. Introduction to drilling fluids. Drilling equipment and the drilling fluid. Testing: equipment, methods and procedure. Specifications for drilling fluid materials. Charts and tables, mud weights and volumes Mixing and manufacture of bentonites, clays and weighting agents. Rheological and wall building properties of drilling fluids. Composition and properties of bentonite and clays. Viscosity reducing agents. Water-clay muds. Salt solutions, starch and gum muds. Oil-base muds. Sodium silicate muds. Prevention of lost circulation. Patent literature abstract. Bibliography Author index. Subject index.

Note. A useful and authoritative summary of the theoretical and the practical knowledge pertaining to fluids and muds used in the drilling of oil wells. It is intended for young engineers who are just beginning to work in the field; and the author warns in the preface that it probably contains nothing which will be new to the expert. Nevertheless there is considerable amount of information which the engineer already experienced in the subject will find useful for reference. This includes fundamental data presented in graphs and tables, the lists of cited literature, and the descriptions of pertinent United States patents. The author is associated with the Houston Chemical Laboratory of the Gulf Oil Companies.

SOCIETY OF EXPLORATION GEOPHYSICISTS
Early geophysical papers of the Society of Exploration Geophysicists. Papers presented at meetings of the Society of Petroleum Geophysicists 1929 through 1935 reprinted from Physics and Bulletin of the American Association of Petroleum Geologists, and Journal of the Society of Petroleum Geophysicists. Tulsa, Okla. Society of Exploration Geophysicists, 1947 844 p. illus 24 cm. $6.00 2082

Note: The chief motive for compiling this volume was to make available to new members of the Society papers that had been published elsewhere before the appearance of the first issue of the Society's *Geophysics*. Fifty-seven papers have been collected and reprinted without apparent change. Since many of the papers describe techniques or contain data that are still useful, the volume is one

that should be added generally to library collections on geophysical exploration.

TAIT, SAMUEL W., JR.

The wildcatters, an informal history of oil-hunting in America. Princeton Princeton University Press, 1946 218 p illus. 22 cm. $3.00 2083

Contents. A stage is set. The Connecticut colonel. Along creek and river National panorama. From salt to oil. The field that lived again. Doodlebugs and rockhounds. That worthless lime rock. Cycloramas. Shape of things to come Poor man's paradise. Fields that couldn't be there. Oil towns styles new and old. Cowpunchers and claim jumpers. End of the trail. Backtracking. Epilogue. Note on sources. Index.

Note This short book offers lively and authentic account of the important discoveries of oil in the United States from the Drake well in 1859 to the reopening of the southern Illinois field in 1937 The author acquired an intimate acquaintance with oil-finding as the son of wildcatter; and he has read the literature of the industry extensively and interviewed many of its pioneers. The story is told mainly from the wildcatter's viewpoint, and many wildcatters who discovered oil pools, as well as some who failed to do so, are named and their activities described. The work is written for general readers and for petroleum geologists and engineers interested in the beginnings of their industry

UREN, LESTER CHARLES

Petroleum production engineering oil field development. Third edition New York Mc Graw Hill Book Company, Inc., 1946 764 p. illus. 24 cm. $7 00 2084

Contents: Properties and occurrence of petroleum in nature. Petroleum exploration methods. Principles of oil-field development. Drilling equipment and methods: general features. Churn drilling equipment and methods. Rotary drilling practice. Casing, casing design and casing methods casing appliances. Oil-field hydrology Fishing tools and methods. Well-completion methods. Well records; logging methods and records. Well records and surveys; inspection of formation samples. Films available from the oil industry Author index. Subject index.

Note. (4141) A textbook for senior students of petroleum engineering and reference tool for practicing engineers. The book is based largely on survey of the literature of the subject and deals with the problems of petroleum exploration and the equipment and methods used in modern well drilling. Revisions and the inclusion of new material in this edition account for more than two hundred additional pages. Rotary drilling is now discussed in five chapters instead of the former one, and the descriptions of well-completion methods and record keeping have been greatly expanded. The extensive chapter bibliographies, now brought up to date, are tied together by the author index. A third edition of the companion volume on oil field exploitation has not yet been published.

METALLURGY AND METALLOGRAPHY

GENERAL

AMERICAN SOCIETY FOR METALS

Metals handbook, 1948 edition prepared under the direction of the Metals Handbook Committee, edited by Taylor Lyman. Cleveland The American Society for Metals 1948 1444 p. illus. 28 cm. $15.00 2085

Contents (abridged) Steel compositions and physical data. General articles. Constitution of alloys. Advertising section. Index.

Note (4138) This outstanding reference book has been given in this edition a very thorough revision. The format has been changed and the text is now printed in two columns on 8¼ × 10¾ pages. The total increase in textual matter over the 1939 edition is about 40 per cent, but a large proportion of the older text also has been rewritten. The book remains the most comprehensive and reliable manual of information on the properties and working of metals and alloys that is available in any language.

AMERICAN SOCIETY FOR TESTING MATERIALS

1946 book of A.S.T.M. methods of chemical analysis of metals. Philadelphia American Society for Testing Materials 1946 402 p illus 23 cm. $4.50 2086

Contents Apparatus and reagents. Ferrous metals: Steel, cast iron, open-hearth iron, wrought iron. Ferro-alloys. Non-ferrous metals: Sampling. Aluminum and aluminum-base alloys. Magnesium and magnesium-base alloys. Copper brass, bronze. Pig lead. Lead- and tin-base alloys. Silver solders. Zinc. Nickel. Electrical heating and resistance alloys. Photometric methods. Spectrochemical analysis methods. Standard samples of metals issued by National Bureau of Standards. Index.

Note. The latest revision of the standard and tentative methods for chemical analyses of ferrous and non-ferrous metals and their alloys, as adopted by the American Society for Testing Materials. This edition contains fifteen new methods including photometric procedures for the analysis of magnesium and magnesium-base alloys, copper and copper-base alloys, and for the determination of bismuth in pig lead, iron in lead- and tin-base alloys, and iron in slab zinc. Also added are spectrochemical analyses of lead alloys, tin alloys, and techniques for the polarographic determination of lead and cadmium in zinc. As in the 1943 edition, each method includes a description of the apparatus and reagents needed, and of the procedures to be followed.

BRAY JOHN LEIGHTON

Non ferrous production metallurgy Second edition. New York John Wiley & Sons, Inc. 1947 587 p illus 24 cm. $6.00. 2087

Contents Introduction. Metals and ores Smelting, slags, and fluxes. Aluminum. Antimony Arsenic. Beryllium. Bismuth. Cadmium. Chromium Cobalt Copper Gold. Lead. Magnesium Manganese Mercury Molybdenum. Nickel. Platinum. Selenium and tellurium. Silver Tin. Tungsten. Vanadium. Zinc. Secondary metals. Marketing of bullion, ores, and concentrates. The use of physical chemistry in metallurgical processes. Index.

Note (4165) Engineering students are here offered the basic principles of the industrial metallurgy of twenty-four non-ferrous metals. Some emphasis is placed on the economic aspects; hence, in addition to adequate descriptions of smelting and refining methods, data are given on the history production, consumption, ore reserves, and marketing of the metals discussed. In this edition the economic information has been broadened and brought up to date. New material on aluminum, magnesium, nickel and the—resulting from developments during World War II—and the chapter on application of physical chemistry to metallurgical processes, have been added. The arrangement whereby all of the information about a metal is contained in one chapter makes the book also useful for reference.

EASTWOOD LA VERNE WINFIELD

Gas in light alloys. New York John Wiley & Sons Inc., 1946 99 p illus 22 cm. $2.50 2088

Contents Introduction. Adsorption of gas on metal surfaces. Diffusion of gases in metals. Solution of gas in metals. General effect of gases in metals. Methods of measurement of gas in aluminum. Solubility of gases in aluminum. Defects caused by hydrogen in aluminum and conditions necessary for bubble formation. Pinhole porosity. Distinction between gas and shrinkage porosity and their relationship. Effect of gas porosity on the properties of aluminum and aluminum alloys. Sources of hydrogen. Mechanism of gas absorption and elimination—effect of oxide skin. Method of avoiding gas absorption. Methods of degassing aluminum and aluminum alloy melts. Gas in magnesium. Summary Bibliography Index.

Note Gas in aluminum and magnesium, but principally in aluminum, is the subject of this work. The discussion thoroughly covers the physical and chemical properties of these gas-metal solutions and then goes on to tell how to control or prevent the occlusion of gases in the molten metals. In spite of its brevity, this book provides a comprehensive statement of the essential knowledge of the subject. The bibliography contains fifty-nine numbered entries to which statements in the text are keyed.

ELBERFELD JOHN

Metallurgical materials and processes. New York Prentice Hall, Inc., 1948 188 p illus 24 cm. $5.00 2089

Contents The refining of metals. Mechanical properties of materials. The fabrication of metals. Grain structure. The equilibrium diagram. The iron-carbon constitution diagram. The heat-treatment of steel. Ferrous metals and alloys. Non-ferrous metals and alloys. Welding metallurgy The cleaning and coating of metals. Powder metallurgy Furnaces and their controls. Metal testing. Metallographic inspection. Appendix. Reference reading list. Index.

Note. An elementary presentation suitable for home study as well as vocational school use. The material is largely descriptive but the fifth and sixth chapters are devoted to theory The book will not interest the reader who is planning to become a professional metallurgist, but it will be helpful to practical workers in industry who want a reliable but easy-to-understand account.

HEINDLHOFER, KALMAN

Evaluation of residual stress. New York McGraw Hill Book Company Inc., 1948 196 p illus. 21 cm. (Metallurgy and metallurgical engineering series Robert F Mehl consulting editor) $4.00 2090

Contents. Introduction. The nature and significance of residual stress. Limitation imposed upon stress analysis by the nature of the metal. Displacement, strain, and stress. Mapping of residual stresses. Detection and measurement of residual stress. Stress pattern. Examples of experimental stress analysis; interpretation of some of the results. Index.

Note A fuller treatment of the causes, effects, and measurement of residual stresses in formed metals than has hitherto been available under one cover In the chapters on measurement, X-ray mechanical, and electrical methods of detection and measurement are all considered. The work is addressed primarily to graduate students in mechanical engineering, consequently few problems for students are included. However both the content and the level of the discussions make it useful as source of information to practicing engineers in many fields. A selection of the related literature is cited in footnotes.

JOHNSON CARL GUNNARD
Metallurgy Third edition. Chicago American Technical Society 1946 418 p illus 21 cm. $5.00 2091

Contents: Properties of metals and tests to determine their uses. Chemical metallurgy Producing iron and steel. Physical metallurgy The theory of alloys. Shaping and forming metals Bearing metals. Light metals and alloys. Copper and its alloys. Steel. Heat treatments for steel. Surface treatments Alloy or special steels. Classification of steels. Cast iron. Powder metallurgy Glossary Index.

Note (4176) An introductory book intended chiefly for men in metallurgical industries ho lack formal education in the subject. It is also an excellent book for lay readers It deals chiefly with physical metallurgy Considerable rewriting and the incorporation of new material that relates chiefly to bearing alloys, copper alloys, alloy eels, cast iron, and heat treating have increased the size of this edition by more than 150 pages over the second edition.

LIDDELL DONALD MACY editor in-chief
Handbook of nonferrous metallurgy Prepared by a staff of specialists Second edition New York McGraw Hill Book Company Inc. 1945 2 v illus. 23 cm. Vol. I, $6.50 Vol. II $7.00 2092

Contents (abridged) Volume I, Principles and processes. Drying, by R. J. Russell. Crushing and grinding, by H. Hardinge. Sampling, by D M Liddell. Screening, by A F Reed Classification, by J V N. Dorr and F L. Bosqui Concentration by D. M. Liddell. Flotation, by S. J Swainson. Dewatering, by J V N Dorr and F L. Bosqui. Filtration, by D F Irvin. Pyrometry by W F Roeser and M. S. Van Dusen. Roasting and sintering, by A S. Dwight. Refractories, by F A. Harvey Separation of solids and liquids from gases, by P E. Landolt and F H Viets Briquetting applied to metallurgy by A. L. Stillman and D M Liddell. Plant layout, by P E. Barbour The electric furnace in nonferrous metallurgy by D M. Liddell. Applied electrochemistry by C. G. Fink Index. Volume II, Recovery of the metals Aluminum, by R. J. Anderson Magnesium and beryllium, by D M. Liddell. The alkali and alkaline-earth metals, by A. C. Loonam. Arsenic, by W. C. Smith. Antimony by C. Y Wang and G C. Riddell Bismuth, by W C. Smith. Lead, by R G. Bowman. Treatment of zinc crust and electrolytic slime, by T D Jones. The metallurgy of copper by F R. Pyne Refining of gold and silver bullion, by E J. Wager Electrolytic refining of lead, by G. Reinberg The electrolytic zinc process, by F Laist, R. B Caples, and G. T Wever Pyrometallurgy of zinc, by W R. Ingalls. Cadmium, by W R Ingalls. Mercury by G I. Gould Chromium, by E. Perkins. The metallurgy of manganese, by E A. Hersam. Cobalt, by A. S Schoel, M. J Murphy and S A. Lawrch. Nickel, by D M Liddell. Tungsten, vanadium, uranium, and molybdenum, by H A Doerner. Metallurgy of radium and uranium, by H. A. Doerner Tin by R L. Hallett. Minor and rare metals, by D M. Liddell. Appendix. Index

Note A comprehensive survey of current practices in the reduction of ores and the refining of crude metals. It is written in the terminology of this branch of metallurgy and is designed as reference book for use by advanced students and graduate mining engineers. In the present edition there are 43 chapters, each of hich is the work of one or more outstanding experts. Compared to the first edition hich was published in 1926 the amount of new material varies considerably from paper to paper Some papers are only slightly revised while others have been extensively or holly rewritten The editor of the work notes that some new processes known to himself and the contributors were omitted for reasons of military security

MEHL ROBERT FRANKLIN
A brief history of the science of metals Sponsored jointly by The Institute of Metals Division, AIME and the Seeley W Mudd Memorial Fund. New York American Institute of Mining and Metallurgical Engineers, Inc., 1948 83 p 23 cm. $1.50 2093

Content The preliminary period—before 1871 1871 to the turn of the century The turn of the century Since the turn of the century Bibliography

Note The term "science of metals, as used in this short work, refers to the science of physical metallurgy Although the author has taken 1871 the date of the founding of the American Institute of Mining and Metallurgical Engineers, as his starting point, and has utilized in part the *Transactions* of the Institute to trace the development and growth of physical metallurgy the study takes into account advances made throughout the world. He has also avoided making the book mere recital of dates and events by emphasizing the growth of ideas rather than techniques, and by grouping the outstanding researches and studies by subject rather than year References throughout the text are keyed to the eleven-page bibliography

NEWTON, JOSEPH
An introduction to metallurgy Second edition. New York John Wiley & Sons, Inc., 1947 645 p illus 23 cm. $5.50 2094

Contents: Part A, Adaptive metallurgy: Metals. The physical properties of metals and alloys. Alloys. Fabrication. Heat treatment. Corrosion. Part B Extractive metallurgy: The sources of metals. Ore dressing. Chemical principles. Fuels and refractories. Pyrometallurgy Hydrometallurgy Electrometallurgy Summary Index.

Note (4179) An introductory text for college students which stresses basic principles rather than details of current practice. Because of its comprehensive scope, it is also useful as reference book and source of information for lay readers. The revisions and rewriting in this edition account for 108 additional pages as compared to the first edition (1938) The brief sections on pyrometry and calorimetry of the earlier edition have been omitted, but the section on corrosion now forms complete chapter The chapters on sources of metals and ore dressing have been considerably expanded.

SINGER, TIBOR ERIC ROBERT
German English dictionary of metallurgy with related material on ores, mining and minerals crystallography welding, metalworking tools metal products and metal chemistry, foreword by J Kurtz. New York McGraw Hill Book Company Inc. 1945 298 p $4 50 2095

Note A carefully compiled reference tool for libraries and for individuals ho are concerned with the translation into English of German metallurgical terms. The definitions are brief but adequate. Although the emphasis is on terminology which was current when the manuscript was in preparation, some obsolete terms such as are encountered in old patents have been included. Words hich were newly-coined, and words whose meanings were extended during the Nazi regime in order to provide substitutes for words of foreign origin, are included and especially designated.

SISCO FRANK THAYER
Modern metallurgy for engineers. Second edition New York Pitman Publishing Corporation 1948 499 p illus 24 cm. (Pitman metallurgy series Frank T Sisco advisory editor) $5.00 2096

Contents (abridged) Metallurgy and engineering. The fundamental structure of metals and alloys. The manufacture of iron and steel. Fundamentals of the heat treatment of steel. The significance of the static properties of metallic materials. The significance of the dynamic properties of metallic materials. Carbon steel as an engineering material. Gray cast iron and malleable cast iron. Low alloy steels as engineering materials. Fundamentals of hardenability High alloy steels as engineering materials. Tool steels, die steels, and cemented hard carbides. Light alloys as engineering materials. Copper and copper-base alloys as engineer-

ing materials. Corrosion and corrosion resistance. The effect of temperature on the mechanical properties of ferrous and nonferrous alloys. Questions. References. Index.

Note. (4183) A comprehensive survey of current ferrous and nonferrous metallurgical practice. It is suitable for engineering students and also for engineers who need general knowledge of the subject. The use of highly technical phraseology has been kept to a minimum, and emphasis is given to the practical aspects and to descriptions of the structure and properties of metals and alloys, rather than to the theories of physical metallurgy. This edition has been revised and enlarged to include material on new techniques and alloys which have been developed since the publication of the first edition in 1941. Two new chapters dealing with the hardenability of metals have been added, and the 13-page annotated bibliography has been brought up to date and now includes a list of recommended periodicals.

SMITH DONALD PRITCHARD

Hydrogen in metals. Chicago The University of Chicago Press 1948 366 p illus 23 cm. (The University of Chicago Committee on Publications in the Physical Sciences) $10 00 2097

Contents: Introduction. Occlusion and occluding metals. Occlusive characteristics—variable permeability and dimensional changes. The course and rate of occlusion. Occlusive capacity and solubility. Occlusion in endothermic occluders—Fe, Co, Ni; Cr Cu, Pt, Ag. Occlusion by palladium and the phases and phase-field limits of palladium-hydrogen. The electrical conduction of Pd-H. Electrode potential and the overstepping phenomenon of Pd-H. Exothermic occlusion by metals other than palladium—Ti, Zr, Th V Cb, Ta U La, Ce; Pr Nd; Sn. Anomalous and nonoccluding metals—Mn, Cr (?) Mo (??), platinum group—Au, W; the B metals. Ternary hydrogen alloys. Magnetic and chemical relations. Survey: the metal and the hydrogen. Supplementary notes. General bibliography (serving also as author index) Subject index (including topics and systems)

Note A critical survey of the published information pertaining to occluded hydrogen, that is the absorption or retention of hydrogen by massive solid metals. Absorption rates from the gaseous state and from solutions are given, solubility data are shown in graphs and charts, and supersaturated states, as well as gas evolution upon heating, are considered. There is considerable emphasis on the known effects of occluded hydrogen upon the mechanical, electrical, and magnetic properties of metals and upon the crystal lattices. The ionization and activation of hydrogen by metal are covered. The bibliography which is keyed to statements in the text, contains 1 470 annotated references and covers in addition to the main subject borderline topics such as photoelectric sensitivity

TAGGART ARTHUR FAY

Handbook of mineral dressing ores and industrial minerals. Contributors Henry A. Behre Charles H. Breerwood, John M Callow Dorr Co Engineering Staff Francis E. Finch, T A. Frankish, Harlowe Hardinge, Menelaos D Hassialis, Donald F Irvin, Edward K. Judd Percey F Smith, E. J Tournier Paul M Tyler New York John Wiley & Sons, Inc., 1945 489 p. illus. 22 cm. (Wiley engineering handbook series) $15.00 2098

Contents Introduction. Metallic minerals Industrial minerals. Cement. Crushing. Wet grinding. Dry grinding. Screen sizing. Classification with water Air sizing and dust collection. Washing and scrubbing Gravity concentration. Flotation Electrical concentration. Miscellaneous methods of concentration. Dewatering. Filtration. Drying Storage and mill transport. Sampling and testing Design and construction of ore treatment plants. Mathematics. Mathematical and miscellaneous tables Index.

Note. This work will eventually consist of two volumes and will supersede the author's *Handbook of ore dressing* New York: Wiley 1927 The second volume will deal with the preparation of fuels and with the methods by which mineral concentrates are converted into commercial products. The present volume provides an encyclopedic treatment of mineral dressing processes and machinery. Diagrams and flow sheets illustrate the layout and processes of many actual installations. Comparative data on the performance of various machines and processes and on many other topics that concern men concerned with the planning and operation of mineral dressing plants are included.

WILLIAMS ROBERT SEATON AND VICTOR O HOMERBERG

Principles of metallography Fifth edition. New York McGraw Hill Book Company Inc. 1948 319 p illus. 23 cm. (Metallurgy and metallurgical engineering series Robert F Mehl, consulting editor) $4 00 2099

Contents The simple alloy diagram. The alloy diagram and its meaning. The plastic deformation and annealing of metals. The nonferrous alloys of technical importance. Iron and steel. The microscopic examination of steel. Laboratory methods. Appendix. Index.

Note (4184) A brief text intended for use by college students of engineering who will need knowledge of metallography but who do not plan to become physical metallurgists. It discusses the characteristics, properties, and methods of analyses of the major ferrous and non-ferrous alloys. Emphasis is placed on the applications of metallography. In this edition the chief revisions are found in the chapter on non-ferrous alloys. Several new tables have been added to the appendix.

WOLDMAN NORMAN EMME

Metal process engineering. New York Reinhold Publishing Corporation 1948 291 p. illus. 23 cm. $6 75 2100

Contents: Casting. The mechanical working of metals and alloys. Forging. Powder metallurgy Joining of metals. Castings versus forgings versus welds. Heat treatment. Surface hardening. Machining of metals. Tool steels. Index.

Note: This book is written from the viewpoint of men about to enter industry or already at work in it. Each chapter is concise survey of present-day materials and techniques, and is designed primarily to inform technically trained men such as advanced students, engineers, and production men about fields in which they are not specialists. Selected lists of references for further reading are included.

ZENER CLARENCE

Elasticity and anelasticity of metals. Chicago The University of Chicago Press 1948 170 p illus. 23 cm. $4.00 2101

Contents: Part One, Elasticity of metals: Formal relations between stress and strain. Low-temperature elastic constants in cubic metals. Temperature dependence of elastic constants. Microelasticity Part Two, Anelasticity of metals: Formal theory of anelasticity Measurement of relaxation spectrum. Physical interpretation of anelasticity Index.

Note: The first monograph published under the auspices of the Institute of Metals of the University of Chicago, which was set up in 1945 to correlate knowledge and research in the fields of chemistry physics, and mathematics that is of interest in the study of metals. It deals chiefly with deviations from perfect elastic behavior but elastic behavior is reviewed concisely as prelude to the discussion of anelasticity It embodies much original research by the author as well as the pertinent findings that have been published previously Related literature is cited in numerous footnotes.

CORROSION

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on atmospheric exposure tests on non-ferrous metals. Pittsburgh spring meeting American Society for Testing Materials February 27, 1946 Philadelphia American Society for Testing Materials 1946 145 p. illus. 23 cm. Paper $1 75 2102

Contents: Introduction, by W H. Finkeldey The corrosion of rolled zinc in the outdoor atmosphere, by E. A. Anderson. The behavior of nickel and monel in outdoor atmospheres, by W A. Wesley Resistance of copper alloys to atmospheric corrosion, by A. W Tracy The use of lead and tin outdoors, by G. O. Hiers. The resistance of aluminum-base alloys to atmospheric exposure, by E. H. Dix, Jr. and R. B. Mears. Tracking troubles in atmospheric corrosion testing, by P S. Olmstead, W E. Campbell, and H. G. Romig. General discussion. Appendices.

Note: Data accumulated from ten years of atmospheric corrosion tests conducted in various parts of the United States of America by the A.S.T.M. are made available in these papers. Each paper is accompanied by report of the discussion at the meeting.

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on atmospheric weathering of corrosion resistant steels. Presented at the forty-ninth annual meeting American Society for Testing Materials Buffalo, N Y June 24–28 1946 Philadelphia American Society for Testing Materials 1946 85 p illus 23 cm. (Reprint, American Society for Testing Materials. Proceedings Vol. 46 1946) Paper $1.50 2103

Contents: Atmospheric corrosion tests on high-chromium steels, by W O. Binder and C. M. Brown. Corrosion-resistant steel for architectural and structural applications, by H. A. Green. Atmospheric corrosion tests of corrosion-resistant steel wires, by A. P John. Corrosion-resistant steel sheet in marine atmospheres, by W Mutchler Atmospheric corrosion tests on corrosion-resistant steel, by G. L. Smith Jr Weathering behavior of corrosion-resistant steel insect screens, by W A. Wesley and H. R. Copson. Results of 15 years' exposure tests on corrosion-resistant steels, by L. V Williams and K. G. Compton.

Note. Experimental work done by several industrial organizations and by the A.S.T.M. are described in these papers. Test methods and results are described in detail. All but two of the papers are accompanied by discussions at the meeting. The information given is of value to architects, engineers, and metallurgists.

BORGMANN CARL WILLIAMS AND OTHERS

Corrosion of metals a series of five educational lectures on corrosion of metals presented to members of the A. S M during the twenty-seventh National Metal Congress and Exposition Cleveland, February 4 to 8 1946 Cleveland American Society for Metals 1946 181 p. illus 23 cm. $3.00 2104

Contents Basic principles of metallic corrosion, by Carl W Borgmann. Effect of composition and environment on corrosion of iron and steel, by C. P Larrabee. Corrosion resistance of stainless steels and high nickel alloys, by W O Binder Copper and copper alloys in corrosive environments, by H. L. Burghoff. Corrosion of light metals (aluminum and magnesium) by E. H. Dix, Jr. Index

Note The papers listed above summarize the latest available information and are supported with numerous charts, diagrams, tables of data, photographs, and literature references. They are addressed to professional metallurgists and other technical men in the metal industries.

LOGAN, KIRK HAROLD

Underground corrosion. Washington, D C. Government Printing Office 1945 312 p illus. 24 cm. (United States National Bureau of Standards. Circular C450) $1 50. 2105

Content Introduction. Investigations of underground corrosion. Causes of underground corrosion. Investigations by the National Bureau of Standards. Results of field tests on ferrous materials. Interpretation of results on ferrous materials. Results of field tests on miscellaneous nonferrous materials. Results of field tests on protective coatings. Laboratory studies of corrosion. Soil surveys and tests. Determination of the condition of pipe line. Tests of coatings. Prevention of corrosion. Cathodic protection. References. Appendices: Cooperators with the National Bureau of Standards in the corrosion investigations. Description of soils at test sites. Methods employed in cleaning of the National Bureau of Standards soil-corrosion specimens. Accumulation of data, calculations, and methods of reporting the data. Construction of the Denison corrosion cell. Darnielle's modification of the Hickling apparatus for measuring potentials. Index.

Note: This circular is an assembly of the results of the National Bureau of Standards investigations of underground corrosion which began in 1922 and is published for the information of persons concerned with the installation and repair of underground structures. In addition to report on research results at the National Bureau of Standards and elsewhere, the book presents general discussion of the corrosion problem and the conclusions to be drawn from the data.

PITTSBURGH INTERNATIONAL CONFERENCE ON SURFACE REACTIONS Pittsburgh, Pa. Corrosion Publishing Company 1948 236 p. illus. 28 cm. U.S., $10 00 foreign countries, $10.50. 2106

Contents Properties of metallic surfaces, by R. M. Burns. Pulse polarization studies of corrosion rates, by G. A. Marsh and H. J McDonald. Theory and technique of measuring metal dissolution rates, by Cecil King. The measurement of permeability characteristics of anodic films on aluminum, by R. L. Burwell and T P May The corrosion of zinc and zinc-coated steel in hot waters, by P T Gilbert. Valence inductivity and catalytic action, by P W Selwood. The mechanisms of some elementary surface reactions, by K. J Laidler Application of the electron microscope in corrosion studies, by E. M. Mahla and N. A. Nielsen. The preparation of single crystals for the study of surface reactions, by A. T Gwathmey The mechanism of the formation of films on metals, by U R. Evans Reactions of metals and alloys with oxygen, sulphur and halogens at high temperature, by C. Wagner Studies of metal surfaces by low temperature gas adsorption, by P H. Emmett. Optical determination of thin films on reflecting bases in transparent environments, by A. B. Winterbottom. Some aspects of internal oxidation in silver copper, nickel and iron alloys, by J L. Meijering. A study of the difference effect, by M. A. Streicher. Measurement of galvanic currents around an underground structure, by N P Peifer and F E. Costanzo. The action of organic inhibitors in the acid attack on mild steel, by T P Hoar Some recent contributions of British corrosion research group, by W J H. Vernon. Investigations of gas-metal reactions by reflection electron diffraction, by J. W Hickman. Theoretical and experimental investigations about conjugated formation of several layers in dry corrosion, by G. Valensi. Étude micrographique de l'oxydation du fer et des transformations du protoxyde de fer by G. Chaudron. Influence of the condition of iron and copper on oxidation at high temperature, by J. Benard. Mechanism of the rapid oxidation of high temperature, high strength alloys, by W C. Leslie and M. Fontana. Surface preparation by electropolishing, by C. L. Faust. The "wetting effect strongly affecting the tensile strength of metals and liquefaction new effect resulting, by C. Benedicks. The behavior of oxide films on aluminum, by F Keller and J. D. Edwards. The breakdown of oxide films in acid vapors, by W Feitknecht. The reactions of metals in high vacuum, by E. A. Gulbransen and K. Andrew

Note A series of technical papers by chemical and metallurgical scientists from American and European universities, industry and research laboratories. Most of the authors cite related references, and many include charts, tables, diagrams, and reproductions of photomicrographs for illustration.

UHLIG, HERBERT HENRY, editor

The corrosion handbook, edited by Herbert H Uhlig and sponsored by The Electrochemical Society Inc. New York John Wiley & Sons, Inc., 1948 1188 p. illus. 23 cm. $12 00 2107

Content (abridged) Glossary of terms used in corrosion. Abbreviations. Corrosion theory Corrosion in liquid media, the atmosphere, and gases. Special topics in corrosion. High-temperature corrosion. High temperature resistant materials. Chemical resistant materials. Corrosion protection. Corrosion testing. Miscellaneous information. General tables. Index.

Note: This reference tool brings together wide range of data and technical information—some of it hitherto unpublished—

regarding the behavior of metals and alloys in various surroundings, and the methods utilized for corrosion control. Papers have been contributed by over 100 engineers and research workers, and selected literature is widely cited. Although the theories of metal corrosion and corrosion testing methods are discussed, the material is concerned primarily with the practical aspects of the subject.

WABER, JAMES THOMAS, AND HUGH J MC DONALD

Stress corrosion cracking of mild steel. Pittsburgh, Pa. Corrosion Publishing Company 1947 94 p. illus 22 cm. U.S, paper $2.00 foreign countries $2.50 2108

Contents: Corrosion cracking and precipitation hardening—association of the two phenomena. Accelerated-precipitation theory of stress corrosion. Methods of testing the accelerated precipitation theory Development of "free nitrogen factor Development of experimental procedure. Verification of mechanism. Preventive treatments. Discussion of contributed criticisms. Author index. Subject index.

Note: A systematic treatise that surveys the metallurgical problems of stress corrosion in steel and the means for its control. In it is expounded corrosion theory developed by the authors, and experimentally substantiated by them, in which the presence or absence of nitrogen in steel appears to be the factor controlling corrosion. The authors show that steel may be protected from stress corrosion by nitriding, and also by shot peening, cathodic protection, wet hydrogen treatments, and inhibitors. Thirty-six tables of chemical and physical data, 48 illustrations of test equipment and graphed test results, and extensive chapter bibliographies are included. The work is for professional metallurgists.

POWDER METALLURGY

HAUSNER, HENRY HERMAN

Powder metallurgy principles and methods. Brooklyn N Y Chemical Publishing Co., Inc., 1947 307 p illus 22 cm. $7 00 2109

Contents: Part I, General data on powder metallurgy Glossary of terms used in powder metallurgy Principles of powder metallurgy Methods of manufacturing metal powders. Commercially available metal powders and their applications. Comparison between physical properties of sintered metals and the equivalent fused materials. Part II, Graphs and tables on powder metallurgical methods: Effect of particle size on the physical properties of the compact. Effect of compacting pressure on the physical properties of the compact. Effect of sintering conditions on the physical properties of the compact. Effect of subsequent working on the physical properties of the compact. Effect of composition on the physical properties of the compact. Part III, Bibliography on powder metallurgy List of abbreviations of periodicals used in the bibliography Chronological bibliography on powder metallurgy Subject index for bibliography Author index for bibliography Index.

Note: Intended principally for metallurgists and metallurgical engineers, this volume is handbook of data concerning the properties and manufacturing methods of products produced from metal powders. The information is presented largely in the form of graphs (of which there are over sixty-five) and tables of which there are about sixty-six. Brief explanatory paragraphs accompany each graph or group of tables, but detailed descriptions of manufacturing methods are not included. Nearly half of the volume is devoted to comprehensive bibliography of periodical and book literature on powder metallurgy This contains 1,064 references arranged chronologically with subject and author indexes. It does not include references to patents.

JAGER, RAYMOND E., AND ROLLA E POLLARD compilers

United States patents on powder metallurgy Washington D C. Government Printing Office, 1947 139 p 23 cm. (United States National Bureau of Standards Miscellaneous publication M184) Paper $0.30 2110

Contents: Introduction. Production of metal powders. Handling and working metal powders. Alloying of metal powders. Applications of metal powders.

Note: Abstracts: A total of 1,251 United States patents pertaining to powder metallurgy are classified under four main headings. Under these main headings, the patents are listed by number [in tabular form] in chronological order [dates not indicated] together with the [last] name of the inventor and short abstract of the patent. Patents issued up to January 1 1947 are included.

SCHWARZKOPF, PAUL

Powder metallurgy its physics and production by Paul Schwarzkopf in collaboration with C. G Goetzel, George Stern, Robert Steinitz and Werner Leszynski. New York The Macmillan Company 1947 379 p. illus. 24 cm. $8 00 2111

Contents: Processing: Metal powders. Compacting. Sintering. Treatment subsequent to sintering. Interrelations between powder characteristics. Compacting and sintering conditions. Bibliography Products Dense materials. Porous products. Refractory metals. Hard metals. Electric contact materials. Magnetic materials. Friction parts. Bibliography Theoretical principles Theoretical concepts. The mechanical strength and ductility of sintered metals as compared with those of regulus metals. Diffusion in solid solutions. Bibliography Future developments. Supplement: Review of recent developments. Bibliography Indices.

Note: A relatively comprehensive treatment in which both the scientific and technical aspects of the subject are covered. Although much of the material is derived from the author's personal researches and experience, the literature also has been carefully surveyed. The bibliographies contain 891 references to books, articles and patents, and there are more than 400 names in the author index. The book is addressed to other researchers in the field, to metallurgists and to technical men in charge of selecting production processes. The author is one of the world' recognized authorities on powder metallurgy

IRON AND STEEL

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on magnetic particle testing. Philadelphia district meeting, American Society for Testing Materials, January 22 1945 Philadelphia American Society for Testing Materials 1945 122 p. illus. 23 cm. $1.25 2112

Contents: Introduction, by A. O. Schaefer Equipment for magnetic particle inspection, by A. V de Forest and C. E. Betz. Magnetic particle inspection, by H. H. Lester. The magnetic particle test as utilized by the railroads, by L. R. Jones. Magnetic particle testing of aircraft parts, by E. O. Dixon. Specifications and procedure, by A. P Spooner. Magnetic powder inspection of castings, by C. L. Frear Magnetic particle inspection of forgings, by C. J Boyle. Miscellaneous applications of the magnetic particle test, by R. A. Snyder. General discussion.

Note: Together these papers constitute fairly comprehensive treatment of the magnetic particle method used for locating hidden cracks and other defects in steel castings and forgings. Present status, theory equipment, methods, fields of application, results obtainable, and analyses of the results are all covered. The work is intended for mechanical engineers, metallurgists, shop superintendents, and others concerned with the testing and inspection of ferrous materials.

BRIGGS CHARLES WILLERS

The metallurgy of steel castings. New York McGraw Hill Book Company Inc., 1946 633 p illus 23 cm. (Metallurgy and metallurgical engineering series, Robert F Mehl, consulting editor) $7 00 2113

Contents: Basic practice for the production of steel for steel castings. Acid practice for the production of steel for steel castings. Gases, deoxidation, porosity and inclusions. Tapping and pouring. Liquid cast steel—liquid contraction and fluidity. The solidification of steel castings. Gates and risers. Contraction in the

solid state. Hot tear formation. *Steel* molding sands and cores. Effect of molten steel on sands, cores, and washes. Casting defects. Cleaning, chipping, and grinding of steel castings. Heat-treatment and metallography. Welding of steel castings. Inspection and properties. Index.

Note A comprehensive survey of the technology of the manufacture of steel castings. Methods of making casting steel in converters, open-hearth furnaces, and electric furnaces are discussed and casting processes are described in detail. Technical and metallurgical control techniques as means of assuring quality are stressed. The author is Technical and Research Director of the Steel Founders' Society of America.

BULLENS DENISON KINGSLEY AND OTHERS

Steel and its heat treatment by D. K. Bullens and the metallurgical staff of the Battelle Memorial Institute. Fifth edition. New York John Wiley & Sons Inc. 1948 2 v illus 23 cm. Vol. I, $6 00 Vol. II, $4 00 2114

Contents (abridged) Volume I, Principles. Temperature conversion table. Steel numbering systems. Metallurgical journals. Section I, Terminology. Preliminary definitions. Equilibrium diagram. Non-equilibrium definitions and considerations. Metallographic structures and associated properties. Suitability of steel for heat treatment. Section II, Testing. Limitations of conventional tests. Conventional tests. Notched-bar impact testing. Special tests. Section III, Heat treatment in the pearlitic domain, below the critical range. Cold-worked steel and its heat treatment. Precipitation hardening. Section IV. Heat treatment involving transformation of austenite. Hardenability. S curves. So-called calculation of hardenability. Pretreatment of austenite, homogenization, overheating. Austenitic grain size and grain growth. Full annealing. Normalizing. Austempering, bainite slack quenching. Quenching, martempering, M_s-M_f retained austenite. Spheroidizing, tempering, graphitization. Let's keep our eyes open. Index. Volume II, Tools, processes, control. Temperature conversion table. Steel numbering systems. Metallurgical journals. Section I, Control of surface conditions. Need for surface strength. Flame and induction hardening. Nitriding and cyaniding. Carburizing processes. Heat treatment of carburized steel. Controlled atmospheres. Fused baths. Section II, Heating and cooling: General considerations. Proper heating in forging and rolling practice. Sources of effective heat for heat-treating operations. Application of heat in heat treating. Control of the cooling phase. Section III, Heat treatment of ferrous castings. Quenching steel castings. Graphite and steels. Section IV. Other applications of heat treatment. Heat treatment in relation to welding and machining. The human element. Index.

Note (4211) The first edition of this work was published in 1916. As successive editions have appeared, it has become solidly established as a useful source of information for practical metallurgists and other persons who desire reliable information about the heat-treating of steel. The exposition is intended primarily for men who have picked up their knowledge of steel on the job, but the book appeals also to men who have studied metallurgy in college. This edition shows very extensive revision when compared to the fourth edition published in 1938. The art of heat treatment made considerable advances in the period between the two editions, and the new knowledge is reflected in both the text and the bibliographies.

HOLLOMON JOHN H AND LEONARD D JAFFE

Ferrous metallurgical design design principles for fully hardened steel. New York John Wiley & Sons Inc. 1947 346 p illus 23 cm. $5 00 2115

Contents Phase transformations in steel. Heat flow. Mechanical behavior. Mechanical properties. Quenching. Hardenability. Quench-cracking. Temperability. Design procedure. Example of design procedure. Bibliography. Index.

Note The subject of this significant work is the metallurgical design of steel parts so that optimum mechanical properties are obtained. Most of the book is devoted to presentation and discussion of the available scientific data that deal with relationships between mechanical properties, metallurgical composition, and heat treatment. The authors admit that these data are incomplete but believe that engineers and metallurgists should use them whenever possible in place of the empirical design methods now commonly employed. Much of the information is based upon research work at the Watertown Arsenal Laboratory but the literature of the field has also been thoroughly surveyed and is listed in a bibliography of over 300 references.

LORIG CLARENCE HERMAN AND R. R. ADAMS

Copper as an alloying element in steel and cast iron. New York McGraw Hill Book Company Inc. 1948 213 p illus. 23 cm. $4.00 2116

Contents Constitution and structure of iron-copper alloys and copper steels. Cast copper steels. Wrought copper steels. Weldability of copper steels. Corrosion resistance of copper steels. Constitution and structure of copper cast iron and malleable iron. Copper cast iron. Copper malleable iron. Bibliography. Name index. Subject index.

Note The literature on iron copper alloys published to about the end of the first quarter of the year 1934 was cited and critically summarized in J. L. Gregg and B. N. Daniloff, *The alloys of iron and copper* (New York McGraw Hill, 1934). In much the same way this new work digests and cites the literature that has appeared since 1934. Both works were prepared at the Battelle Memorial Institute.

MAWHINNEY, MATTHEW HOLMES

The heating of steel. New York Reinhold Publishing Corporation, 1945 265 p. illus. 23 cm $4 75 2117

Contents Chemical effects of heating steel. Fuels and burner equipment. Temperature distribution and furnace control. Heat transfer and fuel economy. The quenching of steel. Alloys and refractories. Steel mill furnaces. Index.

Note Engineers and technicians who buy or operate steel heat treating equipment, or who simply need to keep abreast of furnace developments, will find in this book an accounting of heat-treat improvements made during the years 1925–1945. Although the initial chapter contains discussion and reference list pertaining to the chemistry of the subject, the work is mainly a discourse on methods and equipment used rather than a summary of metallurgical results obtained. The author is a consulting engineer and has also written *Practical industrial furnace design* New York Wiley 1928.

PARKER, CHARLES MITCHELL

The metallurgy of quality steels. New York Reinhold Publishing Corp., 1946 248 p. illus. 23 cm. $6.00 2118

Contents The general nature of steel. Steel quality as related to method of manufacture. Steel quality as related to ingot practice, chemical composition and control. Steel quality as related to rolling practices. Inspection procedures used to determine steel quality. The mechanical testing of steel. Thermal critical points and solid solution changes. Annealing, normalizing and spheroidizing. The effects of alloying and incidental elements. The hardening of steel. Hardenability. Special characteristics of steel. General characteristics of standard steel grades. Index.

Note An introductory work aimed chiefly at beginners in the steel industry but useful to anyone in need of a short, reliable account of the manufacture and properties of modern steels. Included are step-by-step accounts of several typical "heats." The generous number of illustrations, and chapter bibliographies. The author is on the staff of the American Iron and Steel Institute.

VARIOUS METALS

BROWN HIRAM AND ASSOCIATES

Aluminum and its applications, by Hiram Brown with the collaboration of Alexander Klemin and others. New York Pitman Publishing Corporation, 1948 388 p illus. 23 cm. (Pitman books on industrial materials and processes Alexander Klemin, advisory editor) $6 00 2119

Contents (abridged) Introduction to aluminum. Testing methods and definitions of terms. Aluminum alloys. Fabrication of aluminum alloys. Finishing of aluminum parts. Heat-treatment, aging, an-

nesting, and stabilization. Aviation, by S. H. Phillips. Aircraft engines, by M. H. Young. Aluminum castings for aircraft, by M. E. Weldman. Automotive applications of aluminum alloys, by D. M. Boggs. Aluminum in railroads, by R. B. Berschi. Resistance of aluminum-base alloys to marine exposure by R. B. Mears and R. H. Brown. Aluminum in the electrical industry by R. A. Frye and W. A. Graham. Aluminum in the chemical and related industries, by M. F. Wuttinghoff. Aluminum, present and future by A. A. Schwartz. Appendices. Index.

Note: This semi-technical survey is especially suitable for executives and others who need specific and accurate information but do not need it in great detail. Many of the chapters are written by specialists in specific industries but the treatment in these conforms to the general pattern of the book. There are diagrams, sketches, definitions of technical terms, illustrations of processes and machines, and selected bibliographies.

CONLEY, JOHN EDWARD AND OTHERS

Production of metallurgical alumina from Pennsylvania nodular diaspore clays, by J E. Conley R. A. Brown, F J Cservenyak, R. C. Anderberg, H. J Kandiner and S J Green Washington, D C Government Printing Office, 1947 193 p. illus. 23 cm. (United States. Bureau of Mines. Bulletin 465) Paper $0.35 2120

Contents. Introduction. Development of sintering processes. Pennsylvania high-alumina clays. Laboratory sintering and extraction experiments: Materials used. Experimental procedure. Experimental results. Pilot-plant sintering and extraction. Pilot-plant sintering. Pilot-plant leaching. Desilication and selective carbonation of leach liquors: Materials used. Experimental equipment and procedure. Experimental results. Recovery of soda and removal of sulfates: Recovery of soda ash only. Recovery of soda in presence of sulfate. Process flow sheets and production-cost estimates. Appendices: Laboratory test procedures. Typical heat-balance calculation, rotary-kiln-run PC-21. Tabular data for individual tests. Itemized cost estimates for personnel and equipment.

Note: This report covers work done and the estimated costs of recovering metallurgical-grade alumina from the diaspore-containing clays of central Pennsylvania, where there is present considerable tonnage of alumina.

DE MENT JACK, AND H C. DAKE

Rarer metals with foreword by Professor Colin G Fink. Brooklyn, N Y Chemical Publishing Company Inc. 1946 392 p illus 22 cm $7.50 2121

Contents: Beryllium. Gallium—indium—thallium. Germanium—titanium—zirconium—hafnium—thorium. Vanadium—columbium—tantalum. Molybdenum—tungsten—uranium. Selenium—tellurium. Platinum—palladium—rhodium—iridium—osmium—ruthenium Appendix Abridged bibliography of the rarer elements. Appendix International table of atomic weights Appendix III: The periodic system of the elements. Appendix IV: Abundance of elements in igneous rocks. Subject index.

Note: A compilation of basic data on the less well known and comparatively scarce metals, exclusive of the rare earths, which are now used commercially or appear to have potential usefulness in industry. Descriptions are given of their mineralogy, properties, and uses, with emphasis on practical applications and on the newer analytical tests such as microchemistry and fluorochemistry. In addition to the chapter references, the appendix bibliography lists about 180 books and periodical articles of the period 1915–40 on the elements treated in the text and also on the rare earths. The first printing of the book contained an unusual number of errors, consequently the publisher has printed an errata sheet which is now supplied with the book.

GIBBS LELAND EDWARD

Cold working of brass with special reference to cartridge (70-30) brass. Cleveland The American Society for Metals 1946 104 p illus. (part col d) 23 cm. $2.50 2122

Contents (abridged) An elementary introduction. Atomic structure. Hardening by cold work. Hardness designations. Grain size measurements. Properties of 70–30 brass. Influence of copper content. Effects of cold work. Effects of annealing temperature. Cold working and annealing: Importance of grain size control. Microstructure of cold worked brass. Annealing after cold work. Manufacture of cartridges. Requirements for cartridge cases. Sequence of manufacturing operations. Effects of chemical composition Aluminum. Cadmium. Chromium. Lead. Nickel. Tin. "Season cracking" Threshold stress. Practical methods of stress relief. Special properties and physical testing. Tensile testing. Elastic properties. Hardness testing. Metallography. General index.

Note A short volume of practical information for the industrial metallurgist. The author discusses the metallurgical properties of brass and describes the manufacturing methods used to work it into cartridge cases. Numerous photomicrographs, some of which are in color are used to illustrate the crystal structure of brass, and other photographs are of the deep drawing operations employed in making cartridges. The author is technical adviser for the Rome Division, Revere Copper and Brass, Inc.

HARRINGTON, RICHARD HARRY

The modern metallurgy of alloys. New York John Wiley & Sons Inc., 1948 209 p. illus. 22 cm. $3.50 2123

Contents: Foreword, by David Harker Heat treatment definitions. Equilibrium diagrams. Role of strain vs. solid state reactions. A metallurgist's periodic table. The physicist looks at metals. The chemist looks at metals. The metallurgist looks at the physics and chemistry of alloying. Porosity and particles: active and inactive. Index of figures. Index of tables. General index.

Note The author of this book, metallurgical engineer associated with the research laboratory of the General Electric Company recognizes three classes of alloys: allotropic transformations such as steel; solid solution alloys such as copper-zinc; and precipitation-hardening alloys such as copper-beryllium. On this basis he discusses the building up and classification of equilibrium diagrams, the effect of strain on alloys and the physical and chemical properties of alloys. The outstanding qualities of the work are its clear presentation of basic principles, and its emphasis on correct terminology It should be of much value not only as an introductory text but also as "orientation" for professional metallurgists.

JACOBS JAMES H. AND OTHERS

Operation of electrolytic manganese pilot plant, Boulder City, Nev Part I, Pilot-plant operations by J H. Jacobs, J W Hunter W H. Yarroll, P E Churchward, and R. G Knickerbocker Part II, Methods of analyzing manganese ore and electrolytic manganese pilot-plant metallurgical products by R. W Lewis, H. A. Heller and J H. Linck. Part III, Proposal for electrolytic manganese plant for Three Kids ore, Las Vegas, Nev by J H. Jacobs J W Hunter and R. G Knickerbocker Washington, D C. Government Printing Office, 1946 169 p illus. 23 cm. (United States. Bureau of Mines. Bulletin 463) Paper $0.55 2124

Contents: Part I, Pilot plant operations: Introduction. History Description of pilot plant Original plant. Present plant. Results of pilot-plant operation The process. Ore. Crushing and grinding. Reducing roast. Leaching. Countercurrent decantation. Purification with sulfides. Purification with iron. Removal of magnesium. Filtration. Electrolysis. Part II, Methods of analyzing manganese ore and electrolytic manganese pilot plant metallurgical products: Introduction Analysis of ores and metallurgical products. Analysis of electrolytic manganese metal. Appendix: Volumetric standard solutions. Stock solutions and reagents. Colorimetric standards. Part III, Proposal for electrolytic manganese plant for Three Kids ore, Las Vegas, Nev Introduction. Selection of industrial plant equipment and operating conditions from pilot plant results. Comparative cost estimates for 10- and 40-ton electrolytic manganese plants. Index.

Note: The three parts of this bulletin are concerned with the electrolytic production of manganese begun in 1941 by the Bureau of Mines at Boulder City Nev Detailed descriptions of the processes are contained in the first two parts, and the third presents proposals for larger plants based upon experience from 1941 to 1944 at the one-ton pilot plant.

KELLEY KENNETH KEITH AND OTHERS

Thermodynamic properties of ammonium and potassium alums and related substances with reference to extraction of alumina from clay and alunite, by K. K. Kelley C. H. Shomate, F E. Young, B F Naylor A. E. Salo and E H Huffman Washington, D C Government Printing Office, 1946 104 p. illus 23 cm. (United States. Bureau of Mines. Technical paper 688) Paper $0.20 2125

Contents: Introduction. Materials, preparation analyses, and densities. Low-temperature specific heats and entropies. High-temperature heat contents and specific-heat equations. Heats of solution and formation. Heats of reaction, free energies, and equilibria. Applications of thermodynamic data. Summary

Note. From the Introduction "The limited known reserves of good grade domestic bauxite and the abundance of high-alumina clay has encouraged investigation by the Bureau of Mines of methods utilizing the latter as source of aluminum metal. Any process of extracting alumina from clay will, of necessity involve consumption of large quantities of energy and the energy cost will constitute very appreciable portion of the total. It is highly desirable, therefore, that data be available for evaluating the minimum energy requirement of each step of the process, for ascertaining the thermal efficiency in practice, and for pointing the way to possible improvements. It is the purpose of this publication to assemble in one place and to correlate the basic thermal data now available for compounds in the $(NH_4)_2SO_4$—$Al_2(SO_4)_3$ and K_2SO_4—$Al_2(SO_4)_3$ systems and to portray the energy requirements and relationships to be encountered in the related clay and alunite processes.

LI, KUO CH'IN AND CHUNG YU WANG

Tungsten its history geology ore-dressing metallurgy chemistry analysis applications and economics Second edition revised and enlarged New York Reinhold Publishing Corporation 1947 430 p illus. (part col d) 24 cm. (American Chemical Society monograph series No 94) $8.50 2126

Contents: The history of tungsten. The geology of tungsten. The ore dressing of tungsten. The metallurgy of tungsten. The chemistry of tungsten. Analysis of tungsten. The industrial applications of tungsten. Substitution of tungsten. The economics of tungsten. Appendices: Terms of purchase of tungsten ores. Chinese contracts. Post-war tungsten situation. References relating to tungsten alloys. Index.

Note. (4151) A comprehensive survey in which the experience and knowledge of the authors are supplemented by digests of the patent and periodical literature of the field. It is addressed primarily to metallurgists and engineers, but considerable portions of it are not too technical for the non-specialist. Compared to the first edition, this one has been extensively revised. There is new material on ores and known deposits, chemical analysis, and industrial uses. The reference lists have been greatly expanded.

MANTELL, CHARLES LETNAM AND CHARLES HARDY

Calcium metallurgy and technology New York Reinhold Publishing Corporation 1945 148 p illus 23 cm. (American Chemical Society monograph series No 100) $3.50 2127

Contents: The properties of calcium. The production of calcium. Aluminum-calcium alloys. Copper-calcium alloys. Calcium in ferrous metallurgy Calcium hydride. Gold-calcium alloys. Lead-calcium alloys. Magnesium-calcium alloys. Nickel-calcium alloys. Silicon-calcium alloys. Silver-calcium alloys. Tin-calcium alloys. Zinc-calcium alloys. Other calcium alloys. Preparation of chromium, thorium, uranium and zirconium metal powders by the use of calcium. Calcium in the petroleum industry Author index. Subject index.

Note A correlation of available information regarding the methods of production, the properties, and the uses of calcium metal and calcium alloys. The monograph was written for the benefit of metallurgists and chemists, and much of its information is presented in the form of tables and alloy-constitution diagrams. The literature of the subject including patents is cited.

SHIPBUILDING AND BOAT BUILDING

Bradley Cliff

Building the small boat. New York The Macmillan Company 1946 222 p illus. 21 cm. $2 49 2128

Contents: Building to design. Laying down. Getting out the parts. Setting up the frame. Planking. Finishing. Plywood. "Dix"—12'-0" fishing skiff. "Luckybird"—a 13'-0" sailer. "Bluegill"—a 16'-0" utility "Trotter"—an 18'-0" sporter Index.

Note: An easily understood book of instructions for amateurs who are interested in constructing small wooden boats. By means of simple exposition and line drawings the reader is told how to read simple blueprints, how to handle the necessary tools, how to do the specialized carpentry required, and how to assemble the various boat parts. Directions and working plans for building four small boats, rowboat, sailboat, an outboard motor boat, and an inboard motor boat, are included.

Lord, Lindsay

Naval architecture of planing hulls. New York Cornell Maritime Press, 1946 305 p illus. 24 cm. $5.00 2129

Contents: The trend of design. Aspect ratio. Speed ratios. Loading of planes. Preliminary design. Lines. Weights. Hydrostatic calculations. Subdivision and flooding. Hydrodynamic calculations. Resistance and powering. Propulsion. Steering. Hull structure. Trials. Index.

Note. A manual of basic design principles and construction details for seaworthy speedboats, such as the PT boats of World War II fame. The author a prominent naval architect with long experience in the design of such boats, shows that Froude's traditional speed-length ratio is not applicable to hulls that skim the surface, and advocates instead the use of several formulas involving speed-beam relationships. The constant angle plane, or monohedron, is advocated for planing bottoms as a means of providing constant lift and least suction. The book is a significant contribution to naval architecture.

Manning George Charles

The basic design of ships a treatise on the fundamental principles and processes involved in the preliminary design of commercial and military vessels for the use of naval architects and ship designers. New York D Van Nostrand Company Inc., 1945 212 p. illus. 22 cm. $3 75 2130

Contents: Introduction. Preliminary estimate of displacement. Preliminary estimate of principal dimensions and coefficients. Preliminary delineation of lines. Preliminary general arrangement plans. Weight and strength calculations. Hull systems and fittings. Procedure in basic design. Appendix.

Note. A compact introduction written chiefly for beginners and for students in engineering colleges. Integration and differentiation are resorted to in several places in the text, and at one point trial-and-error method is given for the solution of third-degree equations; but most of the text can be understood without preparation in advanced mathematics. Many data are presented in graphs and tables, and there are references to related literature. The author is Professor of Naval Architecture at the Massachusetts Institute of Technology.

Society of Naval Architects and Marine Engineers

Historical transactions 1893–1943 New York The Society of Naval Architects and Marine Engineers, 1945 544 p. illus. 28 cm. U.S., $3.50 foreign countries, $4.50 2131

Contents: David W. Taylor medalists. Part I, United States navy yards: Brief history of the Boston Navy Yard, by W T Tarrant. Brief history of the Cavite Navy Yard, by R. J. Davis. The Charleston, S. C., Navy Yard, by W. M. Sanders. Mare Island, then and now by H. W Lisenbee. The New York Navy Yard, by J. H. West. Norfolk Navy Yard, by M. H. Simmons. Pearl Harbor and its relation to the United States Navy, by P. A. Stevens. The Philadelphia Navy Yard, by officers of the Industrial Department. The Portsmouth, N. H., Navy Yard, by J. G. Tawresey. The Puget Sound Navy Yard, by C. S. Freeman. Brief historical sketch of the navy yard at Washington, D. C., by E. W Rice. Part II, Special types of vessels: The Pacific Coast steam schooner by D. W Dickie. Early American steamship lines, by F. J. Taylor. American merchant steamships, by C. R. Worth. History of the United States coastwise steamers, by E. H. Rigg and A. J Dickie. The development of steam navigation on Long Island Sound, by J. H. Gardner. History of tankers, by H. F Frear. Outstanding New England types of fishing boats, whalers, and yachts, by G. Owen. Ferryboats, by E. Johnson. Part III, Private shipyards: History of Bath Iron Works Corporation, by W S. Newell. History of Bethlehem Fore River Yard, by H. E. Gould. History of Bethlehem Wilmington plant—formerly the Harlan & Hollingsworth Corporation, by W H. Collins. The Cramp shipyard, by W Fossett. The Newport News Shipbuilding and Dry Dock Company by H. L. Ferguson. The New York Shipbuilding Corporation, by J F Metten. History of the Pusey and Jones Corporation, by A. G. Spiegelhalter. The Roach shipyard, by W P Stephens and J. L. Bogert. Sun Shipbuilding & Dry Dock Company by R. Haig. History of Bethlehem San Francisco yard—formerly the Union Iron Works, by H. F Frear. Part IV, The Navy Department and naval vessels: The organization of the Navy Department, by G. H. Rock. Types of naval ships, by H. E. Rossell. Monitor-class warships of the United States Navy by A. Crosby Brown. Revenue cutters, coast guard ships and lightships, by F A. Hunnewell. Development of submarines in the United States, by A. I McKee. Torpedo boats and destroyers, by H. F Frear and W S. Newell. Part V, Miscellaneous: Shipping on the Great Lakes, by J. C. Wachsman. Development of transportation on the North Pacific Ocean, by A. F Pillsbury. Water transportation on inland rivers, by V B. Edwards and F C. Cole. Part VI, Development and history. The development of marine engineering, by J F Nichols. The development and use of steel in shipbuilding, by E. F Kenney. Developments in shipbuilding, by H. F Norton. The development of marine watertube boilers, by J H. King and R. S. Cox. History of United States navigation and vessel inspection laws, by H. C. Shepheard. The American Bureau of Shipping, 1862–1943 by J. L. Luckenbach. Formation of the Society of Naval Architects and Marine Engineers, by W P Robert.

Note: This volume was planned and written as an outline of the history of shipbuilding and shipping, with emphasis on developments in the United States. The papers are not reprints but were expressly written for the collection. Most of them are illustrated and are accompanied by lists of pertinent literature and by discussions.

United States Forest Service. Forest Products Laboratory

Wood a manual for its use in wooden vessels prepared by Forest Products Labora-

tory Forest Service United States Department of Agriculture in cooperation with the Research and Standards Branch, Bureau of Ships Navy Department. Washington D C. 1945 235 p illus. 27 cm. $1.00 2132

Contents: Introduction. Basic information on wood as a shipbuilding material. Factors affecting the use of wood in boats and ships. Wood treating processes for protection and service. Strength of wood. Selecting and storing wood for ship and boat parts. Gluing and laminating. Bending and machining of wood and plywood. Requirements for specific parts of wood ships and boats. Fabrication of wood boats and ships. Modified wood. Glossary of terms relating to wood. Index.

Note. It is probable that this book came to be published because of the increased use of wood in the building of ships and smaller naval vessels during World War II. It is based chiefly on studies and investigations carried out by the Forest Products Laboratory and on a survey of recent woodworking practices in shipyards. Although the purpose in compiling the volume was to collect practical information for the use of shipbuilders, much of the information is also useful in other crafts in which wood is used as a structural material.

MARINE ENGINEERING

CORNELL, FELIX M AND ALLAN C HOFFMAN editors

American merchant seaman's manual for seamen by seamen. Fourth edition revised and enlarged New York Cornell Maritime Press 1946 834 p. illus. (part col d) 19 cm. $5.00 2133

Contents: Marlinespike seamanship. Wire and wire splicing. Blocks and tackle. Deck seamanship. Cargo stowage and handling. Canvas work. Paints and painting. Ground tackle. Steering gear. Examination guide for lifeboatmen and able seamen. Handling small boats under oars. Handling small boats under sail. Signals. Tankerman's guide. Construction and stability. Navigation (revised by Capt. Isvend Simensen) Weather. Ship sanitation and first aid. The rules of the road. Safety. Consular regulations affecting relief of seamen. Laws pertaining to merchant seamen. General information. Index.

Note: (4232b) A comprehensive handbook intended both for practical use on shipboard and as textbook or self instruction guide in preparation for such certificate examinations as A B., Lifeboatmen, and Tankerman. It is widely used in maritime service training schools in the U. S. A. Typical examination questions are included. International code flags are reproduced in color. Compared to the third edition, this one is more than 100 pages longer. Revisions and expansions have been made in various parts of the text, and the chapter on safety has been added.

HEUVELMANS MARTIN

Cargo deadweight distribution. New York Cornell Maritime Press, 1945 86 p illus. 19 cm. $1.50 2134

Contents: Problems of weight distribution. General cargo. Stability or vertical weight distribution. Free surface correction. Complex cargo. Summary. Special considerations in stowage. General cargo plan, safe stowage and despatch. Interdependence of stowage and weight distribution. Deadweight scale. Trim scale. Conclusion.

Note A brief book for stevedores, ship's officers, and others directly concerned with the loading of ships. It is not intended to replace more comprehensive books on ship stowage. Instead it deals as concisely as possible with practical methods of planning the distribution of cargo so as to obtain good stability and trim.

JONES CECIL MORGAN

Small boat engine manual selection, installation maintenance operation New York Cornell Maritime Press, 1948 276 p illus. 19 cm. $4.00 2135

Contents (abridged) Choosing the right engine How engines work. Cylinder blocks, crankshafts, connecting rods, and pistons. Valves, camshafts, and timing gears. Carburetors and fuel pumps. Electrical systems. Storage batteries. Transmission systems. Lubricating, cooling and fuel systems. Diesel fuel injectors, pumps, nozzles, blowers. Propellers, shafting, rudders. Auxiliary power plants, combination units, lighting. Trouble shooting—gasoline engines—Diesel engines. Laying-up, recommissioning, insurance, the motorboat act. Index.

Note. A carefully written book of factual information and instructions for the motorboat owner who personally operates and maintains his own craft. The author thoroughly covers the installation, operation, care, and minor repair of inboard two-cycle and four-cycle gasoline and Diesel engines. The chapter on trouble shooting is conveniently arranged in series of typical situations involving engine failure, for each of which the cause or trouble is listed and the possible reasons for it are mentioned, after which the proper remedies are prescribed.

KING RENO C JR.

Practical marine engineering. New York Prentice-Hall, Inc., 1948 470 p illus. 21 cm. $6 00 2136

Contents Introduction to the marine power plant. Boiler construction—general requirements Construction of scotch boilers. Water-tube boilers. Combustion. Boiler operation and maintenance. Boiler-water problems. Reciprocating steam engines. Steam turbines. Electricity Refrigeration. Pumps and unfired pressure vessels. Miscellaneous equipment. Respiratory apparatus. Fire-fighting equipment—rules and regulations. Index.

Note A concise textbook which is suitable for use in organized classes and also in self-instruction. It is intended primarily for men studying for the Merchant Marine Engineering Officer's license, and many of the review questions included are typical of questions asked in examinations for marine engineers conducted by the United States Coast Guard. It covers not only power equipment, but all of the equipment on shipboard which is the concern of the operating engineers. Equipment is described, and its operation and maintenance are discussed. Duties of the Chief Engineer and the members of his department are outlined.

KNIGHT, AUSTIN MELVIN

Modern seamanship Eleventh edition rewritten and revised by R. A Hall, assisted by the officers of the Department of Seamanship and Navigation, United States Naval Academy Chapters on weather prepared by F L Caudle. New York D Van Nostrand Company Inc. 1945 948 p illus. 22 cm. (Van Nostrand's nautical manuals) $5 00 2137

Contents (abridged) Part I, The ship. Types of ships. The hull and fittings. Care and preservation. Methods of propulsion and steering. Bridge and navigating instruments. Ship's boats. Landing craft. Ground tackle. Mooring. Part II, Ship handling: Screw current effects. Turning. Handling alongside. Formation and station-keeping. Handling boats. Towing and transfer at sea. Stranding—rescue at sea. Part III, Rules of the road. Meeting, passing, crossing, and overtaking—sound signals of intention. Sound signals of identification—distress signals. Lights of identification. Daymarks—motorboats Maneuvering to avoid collision. Part IV Weather: The atmosphere and its circulation. Clouds, fog, and stability Weather elements, instruments, and reports. Weather of the middle latitudes. The tropical cyclone—thunderstorms—tornadoes Appendices: Rope and cordage. Knotting and splicing. Mechanical appliances aboard ship. Sails and sailing rigs. Buoyage—consolidation. Naval terms and definitions. Index.

Note: (4233) For several decades this book has been an official text at the United States Naval Academy Although it contains information that is useful to the merchant seaman, it is intended for naval officers and seamen, and the emphasis on naval aspects has been much increased in the present edition. This edition represents thorough revision and reorganization of the entire book. Most of the strictly reference material has been placed in the appendices. Text and illustrations based on World War II naval experiences are now included, and the work is about 100 pages longer.

LAMBERTON JOHN MADISON editor-in-chief

Marine engineers' handbook prepared by a staff of specialists. With the general engineering fundamentals reproduced from Mechanical engineers handbook, Lionel S. Marks editor in-chief New York McGraw-

Hill Book Company Inc., 1945 2013 p illus. 20 cm $10.00 2138

Contents: Mathematical tables. Weights and measures. Mathematics. Mechanics of rigid bodies. Stresses in framed structures. Friction. Hydraulics. Dimensional analysis. Theory of models. Thermal properties of bodies and thermodynamics. Transmission of heat. Mechanical properties of materials. Mechanics of materials. Vibration problems. Materials of engineering. Machine elements. Pipe and pipe fittings. Power generation. Boilers. Steam engines. Steam turbines. Internal combustion engines. Hulls. Propellers. Reduction gears. Deck machinery Electric drive Heating and ventilating. Pumps and compressors. Fans. Electrical engineering. Measuring instruments. Refrigeration. Ships' trials. Index.

Note This handbook was planned as successor to Sterling's *Marine engineers' handbook* New York McGraw-Hill, 1920, and included in it is the section on reciprocating engines that appeared in the older book. This section has been reset but not revised. The topics (as distinguished from the sections on general engineering reproduced from Marks' *Mechanical engineers' handbook*) are new As in the older book, the sections are by various authorities and are signed The work is designed mainly for students of marine engineering and graduate engineers concerned with ship design and construction rather than for marine operating engineers.

LA DAGE, JOHN AND LEE VAN GEMERT

Stability and trim for the ship s officer New York D Van Nostrand Company Inc., 1946 180 p illus. 22 cm. $3 00 2139

Contents What is stability? Calculation of metacentric height. The calculation of KG The inclining experiment. Stability at large angles of inclination. Free surface. Damage stability Trim. Stability and trim computers and tables. Marine disasters due to loss of transverse and stability Appendix. Index.

Note Senior ship's officers are required to have thorough grasp of ship stability principles, both in order to avert capsizing of seriously damaged vessel and in order to most effectively and most safely stow the cargo. This little book has been produced to give ship's officers and candidates for mate's and master's licenses complete, practical knowledge of the subject. The writing is compact, and the book contains considerably more information than the relatively small number of pages would indicate The authors, both U. S. Maritime Service lieutenants, are instructors in ship construction at the United States Merchant Marine Academy Kings Point, New York.

LECOUNT SAMUEL NELSON AND H. S DUSENBERY

Practical marine electricity New York The Macmillan Company 1945 258 p. illus. 22 cm. $4.25 2140

Contents: Introduction. Cable. Elementary electrical principles. Engine room power Deck power Marine lighting Interior communications. The degaussing system. Testing. Temporary lighting and welding machine maintenance Shipyard maintenance. Maintenance aboard ship. Glossary Index.

Note: Based on home study course prepared for the Moore Dry Dock Company of Oakland, California during World War II, this book provides instruction for electrical workers who are beginning electrical work on ships. Basic operations such as the handling of marine electrical cable are covered. Marine light and power systems and special electrical equipment such as the gyrocompass, gyropilot, fire-detection systems, and the supersonic fathometer are described. The material is mainly practical and descriptive. The special quality of the book is its expert treatment of ship wiring techniques from the viewpoint of the men who install the systems and maintain them.

LEDERER, EUGENE H.

Port terminal operation. New York Cornell Maritime Press 1945 450 p illus. 23 cm. $5.00 2141

Contents (abridged) Part One, Port terminal management Port terminal facilities. Port administration Port services. Facilities for interchange between rail and water Fuel and supplies. Port and harbor facilities S. S. line administration. S. S. line organization. Handling cargo on the dock. Pier management. Warehousing. Storage precautions. Part Two, Stevedoring Administration and operation Handling ship cargo. Stevedoring charges. Part Three, Stowage Responsibilities in stowage. Stowage problems and procedures. Part Four Lighterage and harbor boats. Lighterage operation. Rules governing hoisting operations. Towage. Marine railways. Cable. Harbor boat operation. Care and handling of rope. Up-keep and operation of motorcraft. Appendices: Suggested further reading. Port terminal safety code. Outlines for specifications for repairs. Index.

Note. A comprehensive, practical manual designed for all persons concerned with the handling and stowage of ships' cargo. There is somewhat more emphasis on management principles, but details of the actual handling of cargo are also covered. Photographs and diagrams that illustrate correct and incorrect procedures, equipment for loading and unloading, and of harbor marine equipment supplement the text.

SUMMERILL JOHN F

Tanker manual. Drawings by Richard Naylor New York Cornell Maritime Press, 1947 150 p. illus. 19 cm. $2 75 2142

Contents The tanker. Design and construction. Transfer operations. Tank cleaning. Classifications of oils Maintenance. Dry cargo handling and stowage. Fire protection and prevention. Regulations for construction of tank vessels. Review questions. Useful tables and data. Index.

Note Although the responsibilities and work of both officers and crew on tanker have many similarities to those on vessel that carries dry cargo there are also important differences. The purpose of this useful little volume is to explain these differences to experienced seamen. The proper methods of handling and carrying "black" and "white" oils, vegetable oils, molasses, and latex are fully described. Among the fifty pages of tables are lists of conversion factors, pipe and cylinder capacities, specific gravities of oil, and data on pounds per gallon, barrels per ton, and cubic feet per ton.

NAVIGATION

BENHAM HERBERT E

Aerial navigation Illustrations by Benson Farish. New York John Wiley & Sons, Inc., 1945 344 p illus. 22 cm. $4 00 2143

Contents Introduction. The earth. Charts and maps. Dead reckoning. Tactical navigation. Radio navigation. Aircraft instruments. The flight. Astro-navigation. The astro-line of position. Astronomy and star identification. Magnetism and compass deviation. Meteorological aspects of navigation. Glossary of terms and abbreviations. Appendix. Review problems. Answers to problems. Index.

Note: This excellent introductory text, suitable for self-instruction as well as classroom use, provides the fundamentals in mapping, dead reckoning, and tactical, radio, and astro-navigation that will enable the student to perform basic computations of flight including the reduction of celestial observations to fix. There are problems (with answers) after each chapter and also general review at the end of the book. The author is Director of Ground Training, Pan American Ocean Airways, Inc.

PLUMMER, CARLYLE J

Ship handling in narrow channels. New York Cornell Maritime Press, 1945 107 p illus. 19 cm. $2.00 2144

Contents: Making sternboard. Anchoring. Mooring. Boat trim for maneuvering. Using tugs advantageously. Use of anchors to maneuver. Conclusion.

Note Much original information on the handling of ocean-going vessels in narrow channels is contained in this small book. Some of the special problems discussed are getting away from bank in spite of suction, meeting and passing other ships, floating grounded vessel, dropping anchor to break sheer and docking with slight fair tide. The book is based on the author's own experience as pilot and ship's officer and is written for pilots and junior deck officers.

RABL SAMUEL SUPPLEE

The star atlas and navigation encyclopedia. New York Cornell Maritime Press, 1946 161 p. illus. 29 cm. $5 00 2145

Contents: Mathematics. Speed and distance—bearings. The compass. Latitude, longitude and charts. Nautical astronomy. Time and the Nautical almanac. Old time navigation methods. Modern navigation methods. Plotting the position. The sailings. The stars. Star finding methods. Primitive navigation. Index.

Note: This book is an agreeable combination of theory practice, and star lore. It is aimed chiefly at owners of small yachts who wish to navigate their own craft, and students who wish to instruct themselves in navigation. In addition to the adequate practical discussion of navigational essentials, the author has identified and described very briefly such modern aids and methods as the gyrocompass, radar and loran. His chapter on mathematics includes an interesting discussion of the use of graphic methods in the solution of navigation problems. The star index, star charts, and the drawings of constellations are features that will appeal to laymen interested in astronomy as well as in navigation.

SIMONSEN SVEND T

Blue water navigation. New York Cornell Maritime Press 1947 198 p illus. 23 cm. $3.50 2146

Contents: The celestial sphere. Time. American nautical almanac. The sextant. Finding latitude at noon. Finding longitude at noon. Lines of position. Ageton method. Deviation of compass by azimuth of sun. Great circle sailing. Star identification. Intercept and azimuth by H. O. 214 Streamlined navigation. Solutions to practice problems. Excerpts from *American nautical almanac*. H. O. 211 tables.

Note A textbook originally used by the Army during World War and now revised for study at home as well as in classes. The discussion is confined to navigation with the sextant, chronometer and standard tables, and neither logarithms nor trigonometry is employed. Uses of the *American nautical almanac* the *American air almanac* H. O. 71, H. O. 211 H. O. 214 are illustrated in worked examples; and the *Rude star identifier* and *Rabl star finder* are described. For student navigators who do not have access to the sea, the author outlines the making and use of an artificial horizon. Enough excerpts from the *American nautical almanac* and H. O. 211 tables have been included for purpose of study. There is generous number of practice problems with answers.

STEWART JOHN QUINCY

Coasts, waves and weather for navigators. Boston Ginn and Company, 1945 347 p illus. 29 cm. $4 75 2147

Contents Introduction. Part One, Coast lines, terrain, and routes: The types of coast lines. Selected quotations from pilots for high-land and lowland coasts. Excerpts from pilots describing volcanic islands. Excerpts for coral coasts. Inside routes. Quotations describing bays and deltas. Navigation in rivers. Ocean passages and harbor entrances. Terrain as aviators see it. World transportation and its effects on the distribution of populations. Part Two, Oceanography for navigators: Oceanography. The use of tide and current tables. Theory of tides and tidal currents. Waves, wind currents, and ocean currents. Ice in the sea. Part Three, Meteorology for navigators: Descriptive meteorology. Weather around the world. List of books. Index.

Note An unusual textbook designed to give student navigators an understanding and visualization of the physical environment of navigation. In many places in the text the author has related his own experiences quotations from standard navigational aids and photographs serve to give the student clear picture of the surroundings in which specific task in navigation would be carried out. A large number of photographs, many of them of aerial views, are reproduced. Although primarily text for students, the book will interest many general readers with penchant for geography

UNITED STATES HYDROGRAPHIC OFFICE

Star tables for air navigation, computed altitude and true azimuth for all latitudes. Preliminary edition Washington, D C. Government Printing Office, 1947 321 p. 30 cm. (H. O publication no 249) Paper, $2.00 2148

Note: A manual of original tables designed for the rapid determination of computed altitude and true azimuth of prominent stars by air navigators. The values for computed altitude are corrected for refraction at flight level of 5000 ft. above sea level. All stars of the first magnitude (except Beta Crucis) and 19 of the second magnitude have been used. The tables are planned for use in conjunction with the *Air Almanac*, published every four months by the United States Nautical Almanac Office.

WEEMS PHILIP VAN HORN, AND CHARLES A. ZWENG

Instrument flying. Howard Stark edition. North Hollywood Calif. Pan American Navigation Service 1947 486 p illus. 24 cm. $4.50 2149

Contents: Instruments and classifications. Relation between the instruments. Instrument training. Federal aids to navigation. Use of the radio range. Current developments. Electronics. Airway

MOE, HARRIS G

Flight engineering and cruise control. New York John Wiley & Sons Inc., 1947 209 p. illus. 23 cm. $4 00 2157

Contents: Altimeters and types of altitude. Air speed. Power and associated variables. Power and airplane performance. Supercharged engines. Propellers and propeller efficiency. Basic cruising techniques. Flight planning and control. Weight and balance and their effects. Additional take-off and landing considerations. Jet propulsion.

Note. This book has been designed as an explanation of some of the many complexities involved in operating modern large airplanes. The terminology used is understandable by the average pilot and crew member and the exposition of technical matters is related to the actual flying problems that may be encountered by crews of commercial airplanes. The level of the book is above the usual introductory work on airplane operation; however many experienced airmen may find that the discussion of some topics is too brief to be useful. Such concise statements of fundamental relationships, though, as those of propeller efficiency (p. 109) and the conversion of thrust horsepower to thrust (p. 201) are handy for quick reference.

NATIONAL FIRE PROTECTION ASSOCIATION, INTERNATIONAL

Airplane crash fire fighting manual. Boston, Mass. National Fire Protection Association International 1945 96 p illus (part col'd) 23 cm. Paper $1.00 2158

Contents. Purpose and scope. Equipment. Airplane crash fire and rescue hazards. Rescue features. Basic fire hazards. Armament. Fixed and portable fire protection on the airplane. Anticipating crashes. Response. Rescue operations. Fire fighting. Airfield operations.

Note: A fully illustrated pamphlet in which the special techniques of fighting airplane crash fires are discussed for persons who are familiar with other fire-fighting techniques, particularly members of established town or city fire departments. The special equipment needed and the methods used in fighting this type of fire are described in fair detail. Attention is drawn to the importance and means of conducting immediate rescue operations. A detailed description of various basic types of civilian and military aircraft and the materials used in their construction is given as an aid to the fire fighter. While the handling of cross country crashes is stressed, there is also chapter on fighting fires with standard airfield crash equipment.

NICOLSON MARJORIE HOPE

Voyages to the moon. New York The Macmillan Company 1948 297 p. illus. 21 cm $4 00 2159

Contents: The discovery of new world Supernatural voyages. Flight by the help of fowls. Wanton wings. Flying chariots. Variations on theme. Epilogue. Bibliography Index.

Note. In this volume an outstanding educator presents the results of her own explorations into man's fictional attempts to fly as these appeared in English publications of the seventeenth and eighteenth centuries. Despite the title, the subject is not flight to the moon exclusively but flight by man anywhere and by any means which should have been feasible such as with the aid of angels, or birds, by means of wings attached to the body or by chariots that flew as well as rolled. The book is based on extended research, but it is not primarily scholar's tool. Rather it is aimed at educated general readers who find entertainment in exploring the ways of man's imagination. T aid the graduate student or scholar who insists on using the book, there is an extensive associated bibliography

NORTHROP AERONAUTICAL INSTITUTE. TECHNICAL DEVELOPMENT STAFF

Aircraft basic science by the Technical Development Staff of Northrop Aeronautical Institute. Charles Edward Chapel chief editor New York McGraw Hill Book Company, Inc., 1948 440 p. illus. 29 cm. (Northrop Aeronautical Institute series of aviation texts) $6 00 2160

Contents: Preface, by James L. McKinley Theory of flight. Aircraft structural components. Blueprint reading. Aircraft plumbing. Fundamentals of aircraft electricity Aircraft storage batteries. Aircraft generators. Aircraft motors. Aircraft electrical systems. Pressure and mechanical instruments. Electrical instruments. Index.

Note The Northrop Aeronautical Institute, located in Hawthorne, Calif., is associated with Northrop Aircraft, Inc. This book is the first of series of three, prepared by members of its staff, designed for the practical instruction of student aircraft mechanics. The clear and thorough exposition is supplemented with large number of illustrations. In addition to its usefulness in organized courses, the series provides "refresher" material for those preparing for certification examinations in the U S. A.

REEDER FREDERICK MARTIN

Safe for solo what every young aviator should know Illustrations by Robert C. Osborn. New York Harper & Brothers 1947 216 p illus. 22 cm. $3 75 2161

Contents (abridged) Pilots aren't supermen. Inspect your plane. What the controls do and how to use them. Physical fitness and nervous tension. Preparing your plane for landing or take-off. Stall, the bogie man. Spin, the bogie man's brother Forced landings and emergencies. Precision landings. Acrobatics. Flying aircraft with which you are not familiar Weight and loading. Cross-country flying Night flying.

Note. A book for student pilots which is designed to aid in the development of good flying habits. Written to supplement manuals and personal instruction, it discusses briefly one by one, problems encountered in routine flying and gives the young aviator the benefit of the experience of other pilots in such situations. The informal, anecdotal style and the cartoons done in the manner of the comic strip should attract those who might not otherwise be induced to read book of advice and warnings.

SHIELDS BERT A.

Air pilot training. Third edition New York McGraw Hill Book Company Inc., 1948 719 p illus. 24 cm. $5 00 2162

Contents (abridged) Part I, Aircraft and theory of flight. Anatomy of the airplane. Forces in flight. Stability and control. Aircraft instruments. Part II, Aircraft engines. Aircraft engine parts. Carburetion. Lubrication. Engine instruments. Propellers. Reaction engines. Part III, Air navigation Maps and charts. Cross-country navigation. Dead-reckoning navigation. Radius of action. Computers and calculators. Radio navigation. Celestial navigation Part IV Meteorology: The atmosphere. Stability Winds. Air masses. Fronts. Weather maps and charts. Applied aviation meteorology Index.

Note. (4354) A comprehensive text written for students who are preparing to become pilots. Information of immediate usefulness to students learning to fly and preparing to pass examinations for licenses is emphasized. Technical subjects such as aerodynamic theory are discussed simply and without the use of advanced mathematics. In this edition revisions have been made in order to bring the subjects covered in accord with new requirements for private and commercial licenses, and the discussions of small private planes, flight control, and propellers are among those which have been expanded.

UNITED STATES. CIVIL AERONAUTICS ADMINISTRATION

Terrain flying presenting advice of veteran pilots to promote safety Washington, D C. Government Printing Office, 1947 82 p illus 14 cm. Paper $0.25 2163

Contents: Terrain flying. The Alleghenies. Rocky Mountain region. Swamp areas. Desert regions. Bad lands, cut-over lands, forests, and frozen wastes. Ocean, bay and lake shores. Cities and towns. Flying in Mexico. Flying in Alaska.

Note This booklet is issued as flying tool for the average private pilot. Its subject is the terrain of the United States from the standpoint of the man or woman who flies small private planes, with minimum of instruments and probably no radio. It contains briefly ideas, opinions, and advice contributed by long list of experienced flyers.

WINTER, WILLIAM
The model aircraft handbook, revised illustrations by Paul Plecan and H. A. Thomas. New York Thomas Y Crowell Company 1946 345 p illus. 21 cm. $2.50 2164

Contents: Types of model airplanes. Tools and materials. Preparation of working plans. Model aerodynamics and proportions. Construction. Fittings and parts. Landing gears and pontoons. Covering. Propellers. Paints and finishes. Miniature gasoline engines. Indoor models. Flying and adjusting. Control-line flying. Radio control. Clubs and contests. Model plans and descriptions. Appendix. Glossary. Index.

Note (4421) A comprehensive manual of model aeronautics. The design, construction, and flying of model airplanes are thoroughly covered. There are more than 100 detailed drawings, including airfoil and wing sections, and the appendix contains a series of three-view plans of famous models. Besides several new illustrations, the current revision includes the new chapter *Model plans and descriptions*, a new formula for designing a gas model in conformance with the 1943 rules, and added notes on U-control and G line flying. Most of the other chapters have not been changed.

WINTER WILLIAM AND WALTER L. SCHRODER
Gas models and engines, illustrated by H A. Thomas. New York Thomas Y Crowell Company 1946 183 p illus. 23 cm. $3.00 2165

Contents: Introduction. The gas engine. Theory Construction. Free flight. Covering. Control line. Experimental. Index.

Note: A clearly written guide to the design, construction and flying of gas-powered model airplanes, seaplanes, and flying boats. Both controlled and free-flight types of models are discussed, and the information given covers the various types of miniature gasoline engines, the theory of flight, construction procedures, engine mounting, the installation of control lines, and trouble shooting. The book is intended for both amateur and experienced model makers.

ZWENG CHARLES ALFONSO
Aeronautical training a quiz system" covering navigation meteorology, aircraft, aircraft engines air commerce regulations, including air traffic rules North Hollywood Calif Pan American Navigation Service 1948 444 p illus 26 cm. $3.00 2166

Contents: Aircraft and theory of flight. Aircraft engines. Dead reckoning navigation. Meteorology General operation rules (CAR part 43) Air traffic rules (CAR part 60) Pilot certification (CAR part 20) Maneuvers required for private pilot flight test. Maneuvers required for commercial pilot flight test. Instructions for taking the written examination. Methods of grading flight tests. "Typical" multiple choice examinations.

Note. A standard review book of the question and answer type It is used by schools and colleges offering flight and ground instruction, and by individuals preparing to take the U S. Civil Aeronautics Administration examination for the private and commercial pilot certificates. In this revision the chapters on meteorology and flight theory have been expanded, and a section covering the fundamentals and practice of air navigation has been added.

ZWENG, CHARLES ALFONSO
Flight instructor covering the standard methods of flight instruction, with explanations of flight maneuvers in primary and advanced training. 5th revised edition. N Hollywood, Calif., 1948 335 p illus. 26 cm. $4.00 2167

Contents (abridged) Aircraft and theory of flight. Flight training. Technique of basic flying. Instruction requirements and sequence of maneuvers. Elementary maneuvers. Intermediate and accuracy maneuvers. Advanced and acrobatic maneuvers. Instruction in cross-country flying. Do's and don't's for the instructor. Civil air regulations. Flight instruction as given in a certificated private flying course (land and seaplane) Instructions to flight examiners. Examination on air traffic rules. Typical flight instructor examination (multiple choice) New examination questions. The flight instructor oral examination. Index.

Note. The specific purpose of this manual is to help licensed airplane pilots prepare themselves for U S. Civil Aeronautics Administration's examination for flight instructor rating. It incorporates considerable material supplied by the CAA. The present edition includes significant revisions which include the latest regulations and examples of new multiple choice examinations.

ZWENG, CHARLES ALFONSO
Link instructor manual, including "typical" multiple choice questions and answers for the Link instructor examination. North Hollywood Calif Pan American Navigation Service, 1948 304 p illus. 27 cm. Paper, $4.00 2168

Contents: Instrument flying and the Link Trainer. Instruments and the 1-2-3 system. Attitude instrument flight. Link Trainer operation. Link Trainer maintenance. Radio range characteristics. Flying the radio range. Use of the radio compass. Civil air regulations. Air traffic control procedures and phraseologies. Preparation for the written examination. Appendix.

Note: The Link Instrument Trainer is the most important device used in the early stages of teaching the flying of airplanes by instrument because it enables the simulation of such flying while both student and instructor remain on the ground. This manual has been prepared for persons who wish to obtain CAA "Link Instructor" ratings in order to qualify as teachers with the Trainer. It provides a practical guide to Trainer operation and maintenance, the principles of flying by instrument, radio range flying, and air traffic control. It will be most useful to men studying for the Civil Aeronautics Administration examination.

ZWENG CHARLES ALFONSO
Meteorology for airmen. Revised and enlarged edition No Hollywood, Calif Pan American Navigation Service 1947 231 p illus. 26 cm $3 00 2169

Contents: The U S. Weather Bureau service to airmen. Elements of meteorology and structure of the atmosphere. Weather maps and teletype sequence reports. Moisture of the atmosphere. Heat energy and stability of the atmosphere. Pressure and wind circulation. Air masses. Fronts and thunderstorms. Fogs and aircraft icing. Airway forecasts and their interpretation. Weather forecasting procedure. Altimeter setting and airspeed correction. Winds aloft reports. Analysis of the surface weather map. Appendices. Index.

Note A concise textbook which is suitable for use in connection with instruction in organized courses and also as a review book for self-instruction. It is designed particularly to provide a basic knowledge of meteorology such as is required of candidates for the pilot certificates issued by the United States Civil Aeronautics Administration. The book meets the airman's needs for specific information on how to interpret weather and clouds, how to interpret weather forecasts, and how to recognize and avoid hazardous weather conditions. Typical examination questions are given in an appendix.

AERODYNAMICS

FOWLER, HARLAN DAVEY
Fowler flaps for airplanes an engineering handbook. Los Angeles Distributed by Wetzel Publishing Co Inc. 1948 90 p illus. 29 cm. $5.00 2170

Note. A handbook on the Fowler flap, with an account by the inventor of the history of its development. The analysis covers the principle of this widely adopted high lift device and compares the effects of various flap types and their spans and locations on maximum lift increment. The questions of the optimum aspect ratio for the Fowler flap and the effect of the flap on stalling and landing speeds are among the other problems discussed. The handbook includes the usual data on stress, structural design, control, and weight.

HAMLIN BENSON

Flight testing conventional and jet-propelled airplanes. New York The Macmillan Company 1946 147 p illus. 28 cm. $5 00 2171

Contents: Part I, Conventional airplanes. General order of experimental flight testing. Basic measurements. Bernoulli's equation. Theory of airspeed measurement. Airspeed and altimeter position error calibration. Determination of Mach number Free air temperature determination. True airspeed data reduction. Stalling speed. Engine and power characteristics. Critical altitude determination. Universal speed-power polar Maximum speed determination. Climb performance. Take-off and landing distances. Range and endurance. Stability and control. Part II, Jet-propelled airplanes Turbo-jet propulsion engine characteristics. Concept of thrust and drag. Glide polars Maximum speed determination. Climb performance Take-off and landing. Range and endurance. Flight test report outline. References. Centigrade-Fahrenheit conversion scales. Index. List of symbols.

Note A guide to aircraft testing procedure that explains what factors to test for how test for them, and how to use the test data obtained for correctly evaluating performance of the airplane that has been tested Much f the essential aerodynamic theory is conveniently given in the form f graphs and tables. The work is intended for airplane designers, flight engineers, and test pilots. The author is Project Engineer and formerly Senior Flight Research Engineer Bell Aircraft Corporation, Niagara Falls, New York.

HEMKE PAUL EMIL

Elementary applied aerodynamics. New York Prentice-Hall Inc., 1946 231 p illus 23 cm. (Prentice-Hall aeronautical engineering series, K. D Wood, editor) $4.35 2172

Contents Units and dimensions. Physical properties of air Flow of an ideal fluid Lift and moment of an airfoil in an ideal, two-dimensional flow Three-dimensional flow around an airfoil Induced effects. Viscosity effects. Airfoils and their properties. Compressibility effect on airfoil characteristics Propellers. Performance of conventional airplanes. Helicopters Index.

Note A descriptive and analytical treatment of introductory aerodynamics for engineering students who have already had calculus, physics, and mechanics Some of the chapters, for example the one dealing ith ideal fluid flow are rigorously developed, while others such as those on compressibility effects and helicopters are handled more simply Illustrative examples are freely used, and there are numerous problems as well as selected footnote references to related literature.

LANDÉ, ALFRED

The physics of flight. New York Reinhold Publishing Corporation 1945 122 p illus. 23 cm. $2.50 2173

Contents General principles The profile f the wing. The planform of the wing Biplanes. Stability and control. Performance. The propeller Unconventional types of aircraft Instruments of navigation Appendix Nomenclature of aeronautics. Aerodynamic formulas. Table of notations. Index.

Note: A brief, clearly-written textbook in hich it has been assumed that the reader will be familiar with introductory college physics and algebra but not with calculus The chapter on unconventional aircraft discusses briefly jet propulsion, rotary wing aircraft, gliders, and the automatic pilot as it is applied to bombers.

LIEPMANN HANS WOLFGANG AND ALLEN E. PUCKETT

Introduction to aerodynamics of a compressible fluid. New York John Wiley & Sons Inc. 1947 262 p illus 23 cm. (Galcit aeronautical series) $4 00 2174

Contents Part I, One-dimensional motion of compressible fluid Basic thermodynamics. Equations of motion in one dimension Isentropic channel flow Shock waves Applications to channel flow Optical methods of flow observation. Part Two- and three-dimensional motions of compressible fluid The equations of motion. The small-perturbation method. Some applications of the small-perturbation method. The development of ϕ into power series in the thickness parameter or in the Mach number The hodograph methods. Certain exact solutions for the isentropic flow of a perfect gas. The method of characteristics. The effects of viscosity Airfoils in high speed flow—Comparison with experiment. References. Author index. Subject index.

Note Advanced engineering students, graduate engineers, and scientists interested in the design of airfoil sections or gas turbines will find here careful, largely mathematical discussion of air flow compressibility characteristics. Topics such as supersonic wind tunnel design and the shadow interferometer and Schlieren methods of observing density variations in gas flows are covered. Although it can be used as textbook, the volume contains no problems for the student to solve, and due to security restrictions which are still in force, includes no recent experimental results The senior author is an Assistant Professor of Aeronautics, and the junior author Chief of the Wind Tunnel Section, Jet Propulsion Laboratory California Institute of Technology There are two pages of references to pertinent literature.

MISES, RICHARD VON

Theory of flight. With the collaboration of W Prager and Gustav Kuerti. New York McGraw Hill Book Company, Inc., 1945 629 p illus. 23 cm. (McGraw Hill publications in aeronautical science, Jerome C. Hunsaker, consulting editor) $6 00 2175

Contents (abridged) Part One, Equilibrium and steady flow in the atmosphere The atmosphere at rest. Bernoulli's equation—rotation and circulation. Momentum and energy equations. Perfect and viscous fluids—types of flow Air resistance or parasite drag Part Two The airplane wing Empirical airfoil data. The wing of infinite span. The wing of finite span Part Three Propeller and engine. Part Four Airplane performance Analytical methods of performance computation. Special performance problems Part Five, Airplane control and stability: Moment equilibrium and static stability Nonuniform flight. Dynamic stability of an airplane. Bibliographical and historical notes. Index.

Note. An outstanding textbook written for persons who are familiar with elementary mechanics and calculus. It is suitable for use in the later years of undergraduate engineering courses and in the first year of graduate courses. The treatment of the special topics is not intended to be exhaustive but is reasonably detailed nevertheless. A limited number of problems to be solved are included. The bibliographical and historical notes collected at the end of the volume trace the development of important theories and cite the fundamental literature.

POPE ALAN

Wind-tunnel testing New York John Wiley & Sons Inc., 1947 319 p. illus. 22 cm. $5 00 2176

Contents The wind tunnel. Wind-tunnel design. Calibration of the wind-tunnel jet. Model force, moment, and pressure measurements. Testing procedure Wind-tunnel-boundary corrections. Extrapolation to full scale. Auxiliary testing equipment. Small wind tunnels Appendix Wind-tunnel-model construction. Numerical constants and conversion of units Index.

Note Although much material on wind-tunnel testing of airplane models and parts has appeared in periodicals, and certain aspects of the subject have been treated in books, this work is probably the first comprehensive textbook on the subject. It brings together current information regarding testing procedures, the correction of wind-tunnel data, and extrapolation full scale. The material on these subjects is preceded by concise discussions of the salient features of various types of wind tunnels, the salient principles of wind tunnel design and descriptive tabulation of wind tunnels throughout the world. In addition to its use in connection with formal courses, the book should be useful to laymen and experimenters interested in aerodynamics.

SHERWOOD A. WILEY

Aerodynamics New York McGraw Hill Book Company Inc. 1946 220 p. illus. 23 cm. $3 00 2177

Contents Physical properties of air Principles of fluid flow Dimensional analysis and dynamic similarity Experimental methods. Theory of lift. Monoplane wing theory The boundary layer Compressibility Properties of airfoil sections. High-lift devices. Propeller theory and design. Performance. Control surfaces. Longitudinal stability Lateral stability Unconventional aircraft. Index.

Note: Intended for classroom use in aeronautical engineering courses, this text approaches the subject of aerodynamics through the more practical phases of theory and experiment. Because of the emphasis on physical aspects of flight theory including the use and importance of models for testing airplane design, the author has been able to introduce discussions of advanced topics such as compressibility and flutter. Prior work by the reader in physics and mechanics is expected, but calculus which is used for some of the explanations is not an absolute requirement. Descriptions of the principal wind-tunnel corrections are included.

SIBERT, HAROLD WARD

High-speed aerodynamics. New York Prentice-Hall, Inc., 1948 289 p illus 22 cm. (Prentice-Hall aeronautical engineering series K D Wood editor) $6.00 2178

Contents: Fundamental relations. Thermodynamical relations. Energy Bernoulli and Euler equations. Entropy and isentropic flow. Speed of sound. Mach number Dynamic and impact pressures. Pressure coefficients. Critical conditions. Standard atmosphere. Altimeter. Airspeed indicator. Machmeter and true airspeed meter. Determination of position error. True, indicated, calibrated, and equivalent air speeds. Aerodynamic heating. Reversible adiabatic flow within streamtube. One-dimensional flow in wind tunnel or nozzle. Partial-derivative equations for compressible flow. Disturbance potential. Ackeret supersonic theory. Flow through shock wave. Normal shock wave. Supersonic flow past wedge. Two-dimensional supersonic flow around corner. Busemann parabolic formula. Supersonic flow past cone. Adverse effects of high airplane Mach numbers. Swept wings and wings of low aspect ratio. Determination of high-speed aerodynamic data. Wing drag from wake survey. Tables and charts. Index.

Note: Mathematical methods that are of practical value to engineers concerned with problems in aerodynamic phenomena at high subsonic and supersonic speeds are the chief subject of this book, but it contains also some information on instruments and techniques used in research in this field. Advanced mathematical methods that have not yet yielded practical results are purposely omitted. The book is organized as textbook for engineering students who have had courses in differential and integral calculus and elementary aerodynamics. There are problems but no bibliography.

THEODORSEN THEODORE

Theory of propellers. New York McGraw Hill Book Company, Inc. 1948 164 p illus 23 cm. (McGraw Hill publications in aeronautical science Jerome C. Hunsaker consulting editor) $3.50 2179

Contents: Introduction. The optimum distribution of circulation along the propeller blade. Solution of optimum distribution problem. The propeller mass coefficient—exact thrust, torque, and efficiency formulas—the loss factor. Electrical method for measuring the loading function $K(x)$ and the mass coefficient $\kappa(\lambda)$. Design relations and procedure for single and dual propellers. Slipstream contraction. Propeller selection problems. Body interference problems. Elements of fluid dynamics as related to the propeller theory. The actuator disk. Standard symbols. References. List of charts. Index.

Note: The author of this work is credited with several important contributions to the engineering techniques of propeller design. His own work and the work of others are embodied in this book. Most of the exposition is mathematical and of interest chiefly to advanced students and professional aeronautical engineers.

WOOD KARL DAWSON

Technical aerodynamics. Second edition New York McGraw Hill Book Company Inc. 1947 472 p illus. 23 cm. $5.50. 2180

Contents: Notation and abbreviations. Introduction. Mechanics and thermodynamics of air. Airfoil characteristics. Parasite drag; power required for flight. Engine and propeller characteristics. Airplane performance. Special performance problems. Seaplanes and flying boats. Flight testing for performance. Characteristics of hinged surfaces. Longitudinal stability and control. Lateral and directional stability and control. Appendices: Units and conversion factors. Properties of some liquids and gases. Properties of air. Airfoil data. Parasite drag data. Airplane, propeller and engine data. Index.

Note: (4190) During the twelve years which have elapsed between the publication of the first and second editions of this standard textbook for engineering colleges, great advances have been made in the knowledge of aerodynamics. The present edition has been so revised and enlarged to incorporate the new knowledge that it is practically new work, although the original arrangement has been largely retained. Such new topics as airflow patterns at supersonic speeds, Mach numbers, flap deflection, and flow patterns are now discussed.

AIRCRAFT CONSTRUCTION

ANDERSON NEWTON H.

Aircraft layout and detail design, with a foreword by C. T Reid Second edition New York McGraw Hill Book Company Inc., 1946 437 p. illus. 21 cm. $5 00 2181

Contents (abridged): Requirements for good layout. Descriptive geometry for aircraft layout. Airfoils. General design considerations. Connections. Forgings. Castings. Machined fittings. Fundamental principles of fitting analysis. Strength calculations for riveted and bolted joints. Bending. Torsion. Shear and its application to thin web beams. Columns. Appendix. Index.

Note: (4191) More than one hundred pages of new material have been added in the present edition of this work. The single chapter on fabrication methods that appeared in the first edition has been expanded to form four chapters covering the design of forgings; sand, permanent mold and die castings; machined fittings; extrusions and sheet metal. Other added material includes information on mechanical properties of materials, plotting of bending moment and shear diagrams, and new illustrations and problems. The book is designed as text for advanced courses in engineering schools and for courses offered to men already at work as draftsmen in the aircraft industry.

BARTON MILLARD VERNON

Fundamentals of aircraft structures. New York Prentice-Hall, Inc., 1948 298 p illus 24 cm. (Prentice-Hall aeronautical engineering series, K. D Wood, editor) $6.00 2182

Contents: Part I, Aircraft loads and design specifications: Design requirements. Aircraft loads. Part II, Structural analysis: Behavior of loaded material. Load transmission in single span beams and cantilever beams. General structural relationships and elastic energy. Load transmission in multiple span beams. Frames and rings. Part III, Structural stability: Columns and beam columns. Compressive strength of thin sheet members. Part IV, Stress analysis: Bending. Combined bending and shear. Torsion. Combined torsion, bending and shear. Combined stresses and allowable stresses. Connections. General design considerations. Index.

Note: Essentially an introduction to the basic principles of structural analysis as applied to the problems of aircraft design and construction. The book is written for aeronautical engineering students and describes the behavior of specific airplane structural members under various conditions of stress and strain, and outlines the methods for calculating the value of such stresses. The treatment requires knowledge of integral and differential calculus. Problems to be solved and short bibliographies accompany most of the chapters.

DAVIES WILFRED WAECHTER

Cargo aircraft. New York Pitman Publishing Corporation 1946 216 p illus. 24 cm. (Pitman aeronautical publications, Alexander Klemin advisory editor) $6.00 2183

Contents: Early development. Cargo aircraft for the immediate future. The air-cargo market. Characteristics of air cargo. Fundamental considerations of cargo-plane design. Detail considerations in airframe design. Detail considerations in equipment design. Loading methods and equipment. Handling and stowage methods and equipment. The air tramp and charter plane. Appendices: Requirements for combination cargo-passenger craft. Cargo flow. Development of cost formulas. Aircraft and component original cost values. General characteristics of cargo airplanes. Ground-handling equipment costs. Outline drawings of representative air cargoliners. Index.

Note: In this book the author who is Superintendent of the Aircraft Planning Division of United Air Lines, offers practical guidance to airplane designers and to airline officers concerned with cargo transportation. Cargo is considered to include air mail, air express, and air freight. America's experience with air cargo up to the time of the book's preparation is summarized, and an analysis of the

potential demand for such transportation is presented. Much information is given on cost factors. The design of cargo-carrying planes is thoroughly discussed and suggestions are made for improvements in both airframes and equipment.

MARTIN THE GLENN L., COMPANY

Aircraft structural analysis, prepared by the Engineering Staff of The Glenn L Martin Company; edited by G N Mangurian and Norman M Johnston. New York Prentice Hall, Inc., 1947 418 p illus. 23 cm. $8 00 2184

Contents: Introduction. Loadings on an airplane. Resolution of forces. Shears, bending moment, and torsional moment calculations. Analysis of joints and stresses. Properties of simple sections. Properties of aircraft materials. Design of simple sections in tension or compression. Design of simple sections in bending or shear. Design of tubes in compression, tension, bending, and torsion. Structural fastenings in aircraft. Design of single bolt fittings. Design of multiple bolt fittings with concentric loadings. Design of multiple bolt fittings with eccentric loadings. Design of sheet splices. Structural shape splices. Weight problems in structural design. General references. Appendix: Tables. Index.

Note A practical text designed to cover the subject adequately for aircraft draftsmen and engineers concerned with common structural design problems. The book is based on series of pamphlets that were written for and used as an intensive course given to the draftsmen and engineers of the Glenn L. Martin Company Practice rather than theory is emphasized. The text is concise but clear and there is generous amount of illustrative material.

SIEGEL, PHILIP

The aircraft mechanic, a manual for certificate candidates. New York Pitman Publishing Corporation 1946 313 p illus. 24 cm. (Pitman aeronautical publications, Alexander Klemin, advisory editor) $4 00 2185

Contents: Civil air regulations, techniques, and practices. Aircraft propellers. Aircraft hydraulics. Aircraft rigging and assembly Aircraft wood, fabric, covering, and finishing. Aircraft sheet metal, riveting, welding, and soldering. Index. Answer key

Note The contents of this volume and the arrangement are designed to assist mechanics in preparing for the examination for an aircraft mechanic certificate as set by the Civil Aeronautics Administration. The fundamental principles of each subject are briefly outlined, but most of the material deals with maintenance and repair operations that concern the mechanic in his daily work. A short bibliography and approximately 200 review questions of the multiple choice type follow each chapter.

STEWART FRANCIS S

Airframe materials. New York McGraw Hill Book Company Inc. 1945 237 p illus. 21 cm. $3.50 2186

Contents. The sources of strength of materials. Properties of materials and methods of testing for quality Comparison of certain physical and mechanical properties of airframe materials. Heat-treatment of aluminum alloys. Heat treatment of steel, magnesium, and other materials. Effect of cold working on the properties of aluminum alloys bending limitation of wood, plastics, and magnesium. Corrosion of metals and aging of plastics Cleaning and chemical treatment. Bonding processes used to join materials structurally Casting and forging of aluminum and magnesium other metals. Veneers and plywood Adhesives. Sealing processes used in airplanes, problems involved Plastic compositions. Transparent plastics. Index.

Note The various materials that are used in airplane construction—exclusive of the power plant, propeller and hydraulic and electrical systems—are discussed in this small book. The effects of manufacturing operations and aging on the various airframe materials also are given attention. There are chapter review questions, photomicrographs of metals, and photographs of airframe fabricating techniques. The book was written for vocational school students and for beginning workers in aircraft design and construction.

TITTERTON GEORGE FRANCIS

Aircraft materials and processes. Third edition. New York Pitman Publishing Corporation 1947 357 p illus. 23 cm. (Pitman aeronautical engineering series Alexander Klemin, advisory editor) $5.00 2187

Contents: Definitions. Testing aircraft materials. Steel and its alloys. Aircraft steels—properties and uses. Heat treatment of steel. Surface hardening. Shaping of metal. Corrosion-resisting steels. Nickel alloys. Copper and its alloys Wrought aluminum alloys. Aluminum-alloy castings. Magnesium alloys. Metal-joining processes. Corrosion and its prevention. Wood and glue. Fabrics and dope. Plastics. Transparent materials Rubber and synthetic rubber Selection of materials. Appendices: Weights of common aircraft materials. Standard sizes, weights, and tolerances of round steel tubing. Standard sizes, weights, and tolerances of round aluminum-alloy tubing. Streamline tubing. Strength of steel cable. Tie-rods. Index.

Note (4419) A manual and digest of information on the properties and working of materials used in aircraft structures. It is based largely on United States government specifications and on the technical publications of manufacturers and technical societies. This edition has been revised to include new information on steel tempering and annealing, and centrifugal and precision casting The chapter on magnesium has been considerably expanded, and brief chapter on natural and synthetic rubber has been added. The type has been reset.

AIRCRAFT ENGINES

AMERICAN SOCIETY FOR TESTING MATERIALS

Symposium on materials for gas turbines. Forty-ninth annual meeting, American Society for Testing Materials, Buffalo, N Y., June 24–28 1946 Philadelphia American Society for Testing Materials, 1946 199 p. illus 23 cm. Paper $3 00 2188

Contents Introduction, by N L. Mochel Heat-resisting metals for gas-turbine parts, by H. C. Cross and W F Simmons High-temperature alloys developed for aircraft turbosuperchargers and gas turbines, by J W Freeman, E. E. Reynolds, and A. E. White. Chromium-base alloys, by R. M. Parke and F P Bens. Metallurgy of high-temperature alloys used on current gas turbine designs, by F S. Badger Jr and W O. Sweeny Jr Alloys and ceramic materials for high-temperature service, by H. C. Cross Resistance of iron-nickel-chromium alloys to corrosion in air at 1600 to 2200 F by Anton deS. Brasunas, James T Gow and Oscar E. Harder. Comparative properties of aluminum alloy sheet at elevated temperatures, by A. E. Flanigan, L. F Tedsen, and J. E. Dorn. Tensile and creep strengths of some magnesium-base alloys at elevated temperature by A. A. Moore and J. C. McDonald

Note A correlation and condensation of governmental and industrial wartime research in the field of heat-resisting metals and alloys. Photographs of alloy micro-structures, phase diagrams, charts, drawings, and data tables are included. The references cited include related patents, government reports, scientific and technical journals, and books. The work is intended for metallurgists and metallurgical engineers.

DRAKE ROLLEN H

Aircraft engines New York The Macmillan Company 1948 348 p illus. 24 cm. (Drake s aircraft mechanic series) $5 90. 2189

Contents (abridged) Fundamentals of internal combustion engines. Metals and alloys used in aircraft engines. Glossary of terms used in aircraft engines. Cylinders. Piston assembly Crankshafts. Valves and cams Electrical fundamentals. Fuel and fuel systems. Lubricants and lubricating systems. Propeller fundamentals. Controllable-pitch propellers. Engine installation and cooling systems. Engine instruments. Starting and starting systems. Engine theory and operation. Jet propulsion. Index

—— Aircraft sheet metal. New York The Macmillan Company 1947 233 p. illus. 24 cm. (Drake s aircraft mechanic series) $5.50 2190

Content (abridged) Aluminum and aluminum alloys. Magnesium and magnesium alloys. Iron and iron alloys. Glossary of

terms used in aircraft sheet metal. Heat treatment of sheet metal. Tools and machinery. General safety practices. Technical drawings. Layout. Bend allowance. Shrinking and stretching. Forming aluminum and aluminum alloys. Drilling. Riveting. Forming magnesium alloys. Forming corrosion-resistant alloys. Sheet-metal repairs. Index.

—— Aircraft welding. New York The Macmillan Company 1947 254 p illus. 24 cm. (Drake's aircraft mechanic series) $4.00 2190a

Contents (abridged) Iron and iron alloys. Aluminum and aluminum alloys. Heat treatment. Glossary of terms used in aircraft welding. Technical drawings. Methods of welding. General safety practices. Welding equipment. Fluxes used in welding and cutting. Fundamentals and techniques of welding. Joints used in aircraft welding. Testing welded joints. Welding steel plate. Oxy-acetylene cutting. Welding aluminum and aluminum alloys. Welding copper and copper alloys. Welding of castings. Hard surfacing. Construction of welded engine mount. Welded repairs to aircraft. Index.

—— Aircraft woodwork. New York The Macmillan Company 1946 197 p. illus 24 cm. (Drake's aircraft mechanic series) $3.50 2191

Contents (abridged) Aircraft woods—their identification and uses. Selection of aircraft wood. Glossary of terms used in aircraft woodwork. Plywood. Fundamentals of aircraft woodworking. Technical drawings and their interpretation. Joints and laminations. Aircraft doping and finishing. General safety rules. Construction of root bay of fabric-covered wing. Construction of fabric-covered aileron. Wood propellers. Approved fabric repairs. Approved plywood repairs. Approved wing-structure repairs. Approved fuselage repairs. Index.

Note: A series of practical, simply-worded beginner's textbooks, suitable for use in vocational courses and for self-instruction purposes. A particular effort has been made to include all material needed to meet the requirements of the Civil Aeronautics Administration's aircraft mechanic's license. In each volume numerous photographs and drawings form valuable addition to the textual material. The series when completed will include volumes on aircraft electrical and hydraulic systems, instruments, and engine maintenance, and aircraft maintenance.

FINCH VOLNEY CECIL

Jet propulsion—turbojets. Millbrae, Calif The National Press 1948 328 p. illus. 22 cm. $5.50 2192

Contents: History and development. Thermodynamic considerations. Performance of compressor-turbine jet propulsion engines. Efficiencies of gas turbines and jet powerplants. Graphical solution of the performance of turbojets. Effects of temperature, humidity icing, and dust upon turbojet performance. Mean specific heats for aircraft gas turbines. Centrifugal compressors. Axial-flow compressors. Aircraft gas turbine design. Fuel systems and fuels for jet airplanes. The combustion chamber. The combustion process. Lubrication of turbojets. Thrust augmentation. Materials. Appendix. Index.

Note. A compact introduction which is suitable for use by intermediate students of engineering and by persons out of school who understand calculus and are accustomed to reading graphs. Fundamental engineering theory is presented from the standpoints of thermodynamics and aerodynamics, and specific data are furnished on such aspects as efficiency and on design factors. The book is based on the published literature including number of papers and reports of wartime research which have been released only recently. Good lists of selected references accompany the various chapters. The appendix contains range of useful data on alloys, fuels, etc.

NEVILLE, LESLIE E AND NATHANIEL F SILSBEE

Jet propulsion progress the development of aircraft gas turbines. New York McGraw Hill Book Company Inc., 1948 232 p illus. 23 cm. $4.00 2193

Contents: Forward, by Dr. Jerome C. Hunsaker. The weapon behind the revolution. How the Nazis beat us to it. The British were early too. The AAF and American industry pull miracle. The Navy-industry team takes the field. A big boost from government research. Tough problems still to be whipped. New horizons for flight—a glimpse of the future. Chronology of aircraft gas-turbine developments. Glossary of technical terms and abbreviations. Bibliography. Index.

Note Highly technical discussions of theory (including the pertinent mathematics) and mechanisms have been omitted from this book in order to make it readable to anyone interested in jet engines. Plenty of technical terms are used, but they are used in descriptive sense and, furthermore, are defined in the glossary. The story of developments before and during World War II is told especially well in spite of the mass of details that had to be incorporated. The chronology glossary and bibliography will be useful in libraries.

NORMAN, CARL ADOLPH, AND R. H. ZIMMERMAN

Introduction to gas-turbine and jet propulsion design. New York Harper & Brothers 1948 286 p. illus. 24 cm. $5.00 2194

Contents Introduction. Fundamental mathematics. Approximate gas-turbine analysis. Accurate computations. Entropy expansion, compression, and gas chart. Combustion chambers. Turbines and turbine details. Compressors. Materials and general design considerations. Aircraft power plants. Stationary marine, and locomotive plants. Rockets. Appendix: Derivation of disk formulas. Index.

Note In this excellent textbook the authors have striven to present the subject simply and concretely so that the book will have appeal for engineering students. Basic principles and problems are explored thoroughly for an introductory work, and the many examples of practical and experimental applications are related directly to design problems. The reader will need an understanding of ordinary algebra and some familiarity with graphs. The authors are members of the faculty of Ohio State University

NORTHROP AERONAUTICAL INSTITUTE

Aircraft power plants by the technical development staff of Northrop Aeronautical Institute Charles Edward Chapel, chief editor New York McGraw Hill Book Company, Inc. 1948 378 p. illus. 29 cm. (Northrop Aeronautical Institute series of aviation texts) $6.00. 2195

Contents Power-plant progress. Internal-combustion engine principles. Fuel and fuel systems for aircraft. The float type carburetors. The pressure-injection type of carburetor. Supercharging and induction systems. Aircraft-engine classification, construction, and nomenclature. Aircraft-engine lubricants. Engine-starting systems. Ignition systems. Valve and ignition timing. Engine control systems. Propeller fundamentals. Wood propellers. Propeller inspection, maintenance, and repair. The principles of jet propulsion. General Electric Company's jet and gas turbine engines. The Westinghouse 19B Yankee turbo-jet engine. Acknowledgments. Index.

Note: The first in this series of three volumes, designed for the instruction of student aircraft mechanics, is described as no. 2180 in the present list. This, the second volume in the series, deals with the construction, operation, maintenance, repair and inspection of airplane engines in the clear and thorough manner established by the initial volume. Once again the use of numerous and well-planned illustrations constitutes valuable feature of the text.

SAWYER, ROBERT THOMAS

Gas turbine construction including operation and maintenance. New York Prentice-Hall, Inc., 1947 411 p. illus. 24 cm. $7.00. 2196

Contents. Part I, Heavy equipment: Operating experience with gas turbines. Heavy gas turbine units. Operating instructions for Neuchatel 4000-kw plant. Gas turbine locomotive construction. Elliott gas turbine unit. The closed-cycle gas turbine unit. Part II, Turbochargers: American Locomotive Company. The Elliott Company. General Electric Company. Wright Aeronautical Corporation. Testing of turbo-superchargers. Part III, Aircraft gas turbine equipment: Westinghouse Electric Corporation jet engines. Service instructions for Westinghouse model 19-XA jet unit. General Electric P-80 power plant, J 33. British aircraft gas turbines. Bristol gas turbine propeller unit, Theseus. De Havilland Goblin II. Armstrong

Siddeley turbines. Metro-Vick gas turbine. Rolls-Royce Nene Combustion and fuel research. Junkers Jumo 004 aircraft gas turbine jet power plant. Index.

Note Although this volume is a complete work in itself, it might almost be considered a supplement or companion volume to the author's *Modern gas turbine*, second edition, New York: Prentice-Hall, Inc., 1947 224 p $4.00. The latter book discussed the basic principles of gas turbine construction, operation, and uses. This work gives detailed descriptions of the construction, operation and performance characteristics of specific types of gas turbines now in current use. Engineers will be particularly interested in the data concerning performance, efficiency, operation costs, and maintenance, but the book as a whole will also appeal to the interested layman. The chapters on American, British, and German gas turbine equipment for aircraft occupy almost half of the space.

THORNER, ROBERT H.

Aircraft carburetion. New York John Wiley & Sons Inc., 1946 393 p. illus. 22 cm. $3 75 2197

Contents: Introduction. Principles of physics that apply to carburetion. Basic carburetion. Introduction to diaphragm carburetors. Holley carburetors. Bendix-Stromberg injection carburetors. The Chandler Evans carburetor. Comparison of float, Holley, Stromberg, and Chandler-Evans carburetors. Testing aircraft carburetors. Flight operation. Index.

Note The general principles of aircraft carburetor construction and operation are presented here chiefly by means of discussions covering several representative types of carburetors. The book is designed for pilots, flight engineers, airplane engine mechanics, and other persons who need a basic understanding of how carburetors work. It is not, however, a maintenance or repair manual. There are many excellent photographs, cut-away diagrams, and charts. The author was formerly on the engineering staff of the Holley Carburetor Company.

VALE, JOHN W., JR.

The aviation mechanic's engine manual with questions and answers New York Mc Graw Hill Book Company Inc. 1946 757 p illus. 22 cm. $5 00 2198

Contents (abridged) Fundamentals of aircraft engines. Characteristics of liquid-cooled engines. Characteristics of advanced air-cooled engines. Valve and ignition timing. Precision tools. Induction, fuel, and oil systems. The aircraft magneto. Trouble analysis and correction. Engine inspection and maintenance. Replacement of studs and bushings. Reconditioning valves. Aircraft batteries. Aircraft generators and tests. AN parts for the engine mechanic. Constant-speed and hydromatic propellers. Types of electric propellers. Appendix ? Jet propulsion and atomic power. Visual aids. Index.

Note Prepared primarily to assist candidates for the Civil Aeronautics Administration's Engine Mechanics Certificate, this volume is the work of an experienced instructor. Most of the material is presented in question-and-answer form. Numerous diagrams and photographs effectively supplement the text and the list of visual aids gives the source, running time and other details of available motion pictures and film strips that relate to the subjects of the various chapters.

WILKINSON PAUL HOWARD

Aircraft engines of the world 1948 New York Paul H. Wilkinson 1948 320 p. illus. 24 cm. $10 00 2199

Contents (abridged) Reciprocating engines United States of America—Allison, Continental, Franklin, Jacobs, Lycoming, Pratt & Whitney, Ranger, Wright. Great Britain—Alvis, Armstrong Siddeley, Blackburn, Bristol, De Havilland, Napier, Rolls-Royce. Argentina—Instituto Aerotécnico. Australia—Commonwealth Aircraft. Brazil—Fabrica Nacional de Motores. Czechoslovakia—Praga, Walter. France—Arsenal, Gnome-Rhone, Hispano-Suiza, Mathis, Potez, Regnier, Renault. Italy—Alfa Romeo, Fiat. Spain—Elizalde, Hispano-Suiza. Sweden—Svenska Flygmotor. Switzerland—Saurer. U. S. S. R.—M 11, M-63, M-82, M-88, M 105, M 107, AM-38, AM-42. Jet engines and gas turbines Turbojets—Allison, Boeing, General Electric, Westinghouse, Wright, A V Roe Canada, De Havilland, Metropolitan-Vickers, Rolls-Royce, Rateau, Heinkel-Hirth, U.S.S.R. Turboprops—Boeing, General Electric, Armstrong Siddeley, Bristol, Fedden, Napier. Rocket Jets—Aerojet, Reaction Motors. Miscellaneous: Tabulations—aviation fuels and lubricants. Index—reciprocating engines.

Note: (44354) The present edition of this standard reference book is the sixth. As in earlier editions individual models of engines are shown in photographs and described in "standardized data pages" which are essentially condensed engineering specifications. The number of reciprocating engines described completely has gone down from 125 in the fifth edition to 104, but 24 of the descriptions are for engines not previously listed. On the other hand the number of jet engines and turbines has been increased from 26 to 31 of which 16 are new additions.

ZUCROW, MAURICE JOSEPH

Principles of jet propulsion and gas turbines. New York John Wiley & Sons, Inc., 1948 563 p illus. 24 cm. $7.50 2200

Contents: Review of fundamental principles. Momentum and energy relationships for fluids. Thermodynamics of gas flow. Thermodynamic properties of air. Airplane performance calculations. The airplane propeller. The gas-turbine power plant. The gas-turbine type of thermal jet engine (the turbo-jet engine). Air compressors. Turbine characteristics. The combustion chamber. The rocket motor. Some aspects of high-temperature metallurgy. Index.

Note An authoritative treatment of the fundamental theories and basic principles underlying the design and characteristics of gas turbines and jet propulsion engines. It was developed for use in ESMWT courses given during 1943 and 1944 to graduate engineers working in aircraft plants in the Los Angeles area. Certain data have had to be omitted for reasons of military security; nevertheless, the book should be useful both to aeronautical engineering students and graduates. The references given at the end of each chapter constitute an extensive bibliography of the subject.

ZWENG, CHARLES ALFONSO

Aircraft and engine mechanics' manual. North Hollywood, Calif Pan American Navigation Service, 1947 254 p. illus. 26 cm. $3 00 2201

Contents. Civil air regulations—mechanic rating. Procedures governing repair—alteration of aircraft and aircraft engines. Aircraft mechanic rating. Aircraft engines—mechanic rating. Diagrams, charts and tables covering the aircraft and its engine. The written examination. Appendices. Index.

Note The applicant for a United States airplane and engine mechanic's certificate is required to demonstrate his knowledge and ability by undergoing written, oral, and practical tests. The purpose of the present book is to help prepare the candidate to successfully pass these examinations. The question and answer method of instruction is used, and the questions asked are typical of those encountered in the government tests. The volume is suitable for either home study or for formal classroom use. Where necessary drawings are used to clarify the text. Revised editions are issued frequently with usually only the alterations required by changes in official regulations.

AIRCRAFT EQUIPMENT

JORDANOFF ASSEN

Dials and flight. New York Harper & Brothers 1947 359 p illus. 25 cm. $5 00. 2202

Contents (abridged) Part One, Flight instruments: Airspeed indicator. Aircraft navigational computer Mark 8. Aneroid altimeter. Rate of climb indicator. Turn and bank indicator. Gyro horizon indicator. Accelerometer. Landing gear warning devices. Free air thermometer. Portable instrument field test set. Part Two, Engine instruments. Autosyn remote indicating system. Autosyn system inspection. Warning devices. Pressure indicating systems and gauges. Fuel quantity transmitters and indicators. Temperature indicating systems. Tachometers and synchroscopes. Part Three, Navigation instruments. Navigation watches and airplane clock. Remote indicating compass. Compensation and swinging of airplane compasses. Astro-compass, Mark 1. Drift sights. Aircraft bubble sextants. Portable sextant collimator. Part Four. Automatic pilots.

Note In this work the author has again followed the pattern which proved successful in his earlier books on aeronautical subjects. A clearly written, descriptive text is supplemented by more than 230 figures. A large proportion of the illustrations are reproductions of either photographs or perspective drawings which show inter-

ments and their parts with exceptional clarity. Instruments are discussed as to purpose, principles of operation, location in the aeroplane, testing, and maintenance. The work is intended primarily for home study mechanics and pilots.

ROBERTS, HENRY W
Aviation radio With an introduction by Dr Lee De Forest. New York William Morrow & Company, 1945 637 p illus 22 cm. $7.50 2203

Contents (abridged) One, Understanding aviation radio Radio in aviation. Principles of electricity. Principles of radio. Principles of radio direction finding. Two, Primary radio facilities Aviation radio ranges and radio beacons. Ground direction finders. Aircraft direction finders. Ground communications equipment. Aircraft communications equipment. Three, Advanced radio facilities Advanced radio aids. Instrument landing. Radiotelegraphy for aircraft. Traffic control, Aviation radio regulations. Four Radio navigation. Practical direction finding. Practical radio navigation. Aeronautical charts. Five, Aviation radio apparatus Construction and testing. Aviation radio accessories. Installation and servicing. Aviation radiometeorology Appendices: Aviation radio frequencies. Principal power supplies in foreign countries Condenser color code. Aeronautical "Q" signals. Aviation radio facilities. Index.

Note: Written in simple, non-technical terms and containing 441 diagrams and photographic illustrations, this volume is a history and exposition of radio in aviation. It can serve equally well as an introduction to the subject for the layman and as a handbook for radio men and aviators wishing to learn more about aviation radio.

WERNER EARL F
Aircraft instrument maintenance. New York McGraw Hill Book Company, Inc., 1948 466 p illus. 23 cm. $7.50 2204

Contents: Introduction to instruments. Instrument installation. Pressure gauge group. Tachometer group. Thermometers. Remote indicator. Pitot-static system. Compasses. Liquid-level gauges. Gyroscopic group. The air-driven automatic pilot. Field test set. Appendix. Index.

Note. Primarily this book is designed for the beginning aircraft mechanic, but it contains much information that will be useful to advanced mechanics and also to pilots. It covers the purposes, mechanical constructions, methods of installation, and the simpler servicing operations for all types of instruments now used on airplanes. Detailed procedures for routine inspections are given. Maintenance operations that involve bench testing, calibration and internal repair of instruments are not covered. The book is exceptionally well illustrated.

AIRPORTS

FROESCH CHARLES AND WALTHER PROKOSCH
Airport planning. New York John Wiley & Sons, Inc. 1946 250 p. illus 29 cm. $7.00 2205

Contents: The airport and the community. Present and future aircraft. Airway and airport traffic control. Airport types. Fundamental airport requirements. Airfield planning. Airfield construction. Airport lighting. Airport building design. Hangar design. Special services. Special problems and miscellaneous facilities. Glossary Index.

Note This book indicates the relationship of airports to the communities they serve and shows how the characteristics of aircraft affect the design of airports. Flexibility to meet the changing demands of new types of aircraft is stressed, and airport accessibility size, obstructions, utilities, and necessary buildings are discussed. The work is primarily a survey of the factors influencing airport design, rather than a detailed manual of construction methods, and as such is intended for architects, engineers, contractors, airfield managers, and city planners. There are numerous plans, photographs and chapter bibliographies.

GLIDDEN HORACE K. AND OTHERS
Airports design, construction, and management, by Horace K. Glidden Hervey F Law and John E. Cowles New York McGraw Hill Book Company, Inc. 1946 583 p illus. 23 cm. $7.50 2206

Contents: Preliminary requirements to airport planning. Site selection. Survey Soils—tests and classification. Grading design. Drainage. Pavements. Turf. Obstructions. Lighting. Airport buildings. Traffic control towers. Radio aids. Communications. Management and operation. Zoning. Appendices. Index.

Note. The three authors, all of them experienced in airport planning and operation have endeavored to deal in some measure with all of the important factors relative to airport design and construction management. They have included a large amount of information on tests for figures and standards which are normally found only through a search of periodical literature. The first half of the book offers a general discussion on site selection, soil testing, etc. The appendices account for at least half of the book's length, and consist of a compilation of technical data and information, including standard specifications, regarding the construction of runways and aprons. A glossary of terms is included and tables and illustrations are collected at the end of the volume.

UNITED STATES CIVIL AERONAUTICS ADMINISTRATION
Airport drainage. Washington, D C Government Printing Office, 1946 80 p. illus. 26 cm. Paper $0.30 2207

Contents: Characteristics of airport drainage. Purpose of airport drainage Hydrologics of airport drainage: Rainfall. Run-off. Run-off coefficient. Time of concentration. Collection and disposal of run-off. Flow in conduits. Structures. Grading for drainage Selective grading. Soil conditions Frost line. Loads on conduits. Design of drainage system: Basic information required. Topographic study Drainage lay-out. Surface drainage. Ponding. Subsurface drainage. Erosion control. Methods of construction Excavation. Trenching. Rock excavation. Sheeting. Lines and grade. Pipe bedding. Laying and aligning pipe. Pipe jointing Backfilling. Structures. Inspection.

Note This pamphlet presents the basic information about drainage needed to provide an airport with a smooth, well-drained landing area sufficiently firm to permit the safe operation of aircraft under all weather conditions. It is intended for the engineer responsible for recommending and designing airport drainage, and a knowledge of the fundamentals of hydraulics is presupposed.

PHOTOGRAPHY

ADAMS ANSEL

Camera & lens studio darkroom, equipment. New York Morgan and Lester 1948 120 p. illus. 23 cm. (Basic photo series. 1) $3.00 2208

Contents (abridged) Selection of equipment. Setting up the camera. Camera adjustments. Lens coverage. Selection of lenses. Perspective. Wide angle lens effects. Scale. Focus Depth of field. Long-focus lenses and telephotography Shutters Miniature cameras and lenses. Studio equipment. Copying. Darkroom equipment. Finishing room. Negative storage. Print storage. Print display devices. Insurance and legal precautions. Lens data. Filters. Field equipment. Index

Note An expert discussion of photographic apparatus and of good techniques. The book is not comprehensive but it contains much information that is of value to advanced amateurs and even to commercial photographers. Considerable space is given to such topics as the effects of various types of lenses on perspective, points that are often ignored in beginners' books. The volume is one of series that will eventually contain entire volumes on such subjects as photography by artificial light.

ADAMS ANSEL

The negative exposure and development basic photo 2 New York Morgan and Lester 1948 120 p illus. 23 cm. $3 00 2209

Content Description of terms used in this book. Light. The effect of light on the negative. The gray scale. Visualization The exposure chart. Placement of values on the exposure scale. Obtaining optimum opacity Gamma Fog. Lens flare and image contrast. Speed rating of films Exposure meters Developers and development. The stop bath. The fixing bath Washing. Drying. Development of the miniature negative. Light sources included in the image Copying Some problems of interpretation. Special methods and treatments. Spotting and retouching negatives. Formulas. Negative defects. Index

Note The detail with which this particular phase of photography is presented in this manual may be beyond the actual needs of the average amateur photographer However the discussions of fundamental principles, the effects of light on the negative, and outlines of working procedures will be of value to the student and professional photographer. Ample information is provided regarding the formulation and action of a variety of developers, stop baths, and fixers.

BOUCHER PAUL EDWARD

Fundamentals of photography, with laboratory experiments Second edition. New York D Van Nostrand Company Inc. 1947 395 p illus. 23 cm. $4.00 2210

Content (abridged) Historical development and use of the hand camera. Developers and fixing solutions. Camera lenses and diaphragms. Camera shutters and shutter-speed measurement Some properties of the photographic emulsion The control of negative contrast Printing processes. Color characteristics of light filters and films. Enlarging or projection printing The preparation of lantern and film slides for projection. Toning and dye staining prints. Color photography Ultraviolet and infrared photography X-ray photography Motion picture photography Laboratory experiments Appendix A—Useful tables B—Formulary C—Glossary Index.

Note (4477) Although this volume is intended as a text for an introductory college course in photography its detailed consideration of the physics and chemistry of the photographic process and its practical suggestions make it of value to the amateur photographer Class-room needs are met by the inclusion of chapter references, review questions, and a collection of experiments which supplement the textual material. The first fifteen chapters remain the same as in the 1940 edition. The chapter on color photography now includes sections on Koda-color prints, Ansco reversible film and natural color prints with Ansco Printon. The three chapters covering ultraviolet and infrared photography X-ray photography and motion picture photography are new

CLARK, WALTER

Photography by infrared its principles and applications Second edition New York John Wiley & Sons Inc. 1946 472 p illus. 22 cm. $6 00 2211

Content The subject. The general practice of infrared photography Photographic darkroom practice. Characteristics of photographic materials. Photographic sensitizing for the infrared. Herschel effect and indirect methods of infrared photography Sources of infrared radiation. Examination and differentiation of materials by infrared. Medical infrared photography Infrared photography applied to botany and paleontology Infrared photomicrography Special applications of infrared photography Camouflage detection by infrared photography Penetration of radiation through the atmosphere; general and theoretical. Penetration of radiation through fog and haze practical observations. Optical characteristics of materials in the infrared. Appendix I: Infrared materials available commercially Appendix II: Weights and measures—conversion tables. Appendix III: Kodak formulas for photographic processing solutions Name index. Subject index.

Note (4900a) Very substantial revisions and additions have been made in this edition of the standard book on infrared photography The chapter on camouflage detection by infrared has been added, the bibliographies have been revised to include literature published as late as 1945 and many parts of the original text have been rewritten or amplified. Although the book is designed primarily for practical photographers who specialize in scientific and other advanced types of photography it is also useful as survey of the knowledge and literature of the subject.

GODSEY TOWNSEND

A guide to photographic control. New York Duell Sloan and Pearce 1948 200 p. illus. 24 cm. $4 00 2212

Contents: Preface Light in the darkroom. Part One: Control through ideas. Part Two Control when taking the picture. Part Three Control when processing the negative. Part Four: Control when making the print. Conclusion. Bibliography Index.

Note Management of the entire photographic process so as to produce the effect that is desired is the theme of this book. The author points out that a photograph can be planned to communicate, to instruct, to entertain, or to provide vicarious thrills. Approximately the first one-fifth of the book deals with planning the photograph, but the remainder is concerned with technical matters such as correct exposure, the use of filters, artificial lighting and with developing, fixing, dyeing, enlarging, printing, etc. A number of formulas for photographic chemicals are given. The author is Director of Photography for Stephens College.

HENNEY KEITH

Color photography for the amateur New York Whittlesey House, McGraw Hill Book Company Inc. 1948 Revised edition. 355 p. illus (part col d) 21 cm $5.00 2213

Contents Introduction Color and color processes Films and filters. Making transparencies. Separation negatives Imbibition color prints. Carbro pigment printing. Ansco Printon; recent developments. Index

Note (4536) The author of this book is an amateur color photographer of long standing. His descriptions of developing and printing materials and procedures are based largely on his own experience. The exposition is clear and detailed and contains many unique pointers. In comparison to the first edition (1938) there has been a good deal of revision and expansion particularly in the chapters on transparencies, separation negatives, and color printing processes.

There is also much new material on masking for color correction and bibliography of this subject.

JAMES T HOWARD, AND GEORGE C. HIGGINS

Fundamentals of photographic theory New York John Wiley & Sons, Inc., 1948 286 p. illus. 22 cm. $3.50 2214

Contents: Outline of the photographic process: Terminology. The photographic emulsion. Formation of the latent image. Reciprocity law failure and other exposure effects. The mechanism of development. Composition and reactions of the developer. General kinetics of development. Fixing and washing. Sensitometry I, Exposure and development. Sensitometry II, Density and its measurement. Sensitometry III, Interpretation of sensitometric data. The theory of tone reproduction. The structure of the developed photographic image. Sensitizing and desensitizing. Appendix: Optical terminology. Index.

Note. This book is concerned only with the basic photographic process, that which involves the use of silver salt as light-sensitive material. Light-sensitive dyes, cameras, and lenses are mentioned only incidentally. *It will be of value as an introductory* work for college students, advanced amateurs, and persons with professional interest in the physics and chemistry of photography. The treatment assumes that the reader will have fair knowledge of basic physics and chemistry. The authors are on the staff of the Eastman Kodak Company's research laboratories.

LESTER, HENRY M

Photo-lab-index. The cumulative formulary of standard recommended photographic procedures New York Morgan & Lester 1947 illus. 22 cm. $16 00 2215

Contents. Introduction and index. Ansco. Demonville. Defender. Dupont. Du Pont. Eastman Kodak. Haloid. Film data. Filter data. Illumination. Photo papers. Miscellany—weights, measures, conversions. Photographic chemicals. Cine data. Darkroom. Color data. Photographic optics. Defects in negatives and prints. Transparencies and slides. Copying. Photomechanical processes. Bibliography. Photo words.

Note. (4485) A manual of useful information and technical data on photographic procedures, processing, and materials. It is intended for reference use in photographic workshops where it can supplant many miscellaneous pieces of manufacturers' publications. The bibliography compiled by Albert Boni, is an arrangement by topic of about 3,000 references to books, pamphlets, and periodical articles. The chapter entitled "Photo words" is a glossary of technical terms and abbreviations. Quarterly supplements designed to keep the basic volume up to date are available by separate subscription at $1 00 per year. A new edition of the basic volume is scheduled for publication in 1949.

MORGAN, WILLARD D AND HENRY M LESTER

Graphic graflex photography the master book for the larger camera. Eighth edition. New York Morgan & Lester 1947 423 p. illus. 26 cm. $4.50 2216

Contents: Elementary graflex and speed graphic photography, by K. Conner. Negative exposure and development, by H. P. Rockwell, Jr. Your lens, by R. Kingslake. How to use filters, by J W McFarlane. A design for printing, by A Adams. Understanding photographic printing, by M. Von. Kodachrome photography by J W McFarlane. Ansco color by S. L. Jenkins and L. E. Varden. Illumination and its control, by D J Mohler and R. E. Wunsch. Portrait photography by L. Gilpin. Composition and the view camera, by B. Abbott. Perspective control and view camera technique, by J S. Carroll. Documentary reproduction, by V D Tate. Action photography by K. Dierwell. Photographing the dance, by B. Morgan. Synchroflash photography by W D Morgan. Flash problems and their solutions, by E Theisen. News and press photography by F Scherschel and S. K. Kalish. The syndicate and metropolitan press photography by F Noel. Publicity photography by V H. Beales. Illustrative and advertising photography by J. F O'Reilly. Photography in criminology by W A. Winfield. Photography of children, by T Karlsen. Aerial photography by W D. Morgan. The photographic darkroom, by H M. Lester. Photomicrography with the graflex, by J Weber. Personal identification photography by J G. Liechen. Exploded views, by J. Allen. Graflex and graphic equipment, by H. M. Lester. Index. Catalog section.

Note (4491) A reference work which, although planned specifically for users of the Graflex, Speed Graphic and similar large cameras, contains much that will be useful to the photographic enthusiast, regardless of type of equipment used. The chapters, each of which has been prepared by an amateur or professional photographer cover both fundamental principles and the more advanced techniques of the photographic art. In this edition new material has been added on Ansco color film, portrait photography photography in criminology and the preparation of exploded views.

MORGAN WILLARD D , AND HENRY M. LESTER

The Leica manual a manual for the amateur and professional covering the field of photography with the Leica camera. Eleventh revised edition. New York Morgan & Lester 1947 552 p illus. 21 cm. $5.00 2217

Contents (abridged) The Leica camera comes of age, by M. Kennell. Part I, Basic Leica camera technique: Leica camera and its auxiliary equipment, by W D Morgan. My Leica camera technique by A. F Bertsman. Leica camera lenses, by H. W Zieler. Color filters, by H. M. Lester. The 35 mm film—its selection, exposure and development, by H. M. Lester. Synchronized flash photography, by G. W Hesse. Your own darkroom, by W D. Morgan. Enlarging and contact printing, by W D. Morgan. Enlarging papers and printing, by E. M. Ladlum. Copying and close-up photography by W D Morgan—data tables by H. M. Lester. Making positives for projection, by W D Morgan. Projecting your pictures, by W D. Morgan. Stereoscopic photography by A. Wolfman. Natural color photography with Kodachrome film, by H. M. Lester Ansco color film and Ansco Printon by J. S. Carroll. Part II, Leica camera in science and education The Leica camera in historical research, by J. A. Benson. Archeology and exploration, by C. Bomstad. Photomicrography with the Leica camera, by H. W Zieler Dental photography by A. L. Dunn. Infrared photography by J P Gaty Part III, The Leica camera in specialized fields: Candid, stage and news photography by J W Lemon. Aerial photography by J P Gaty Leica camera in the tropics, by J W Vandercook. Index.

Note (4493) Although this manual is written primarily as a guide for owners of Leica cameras, it has proved to be of considerable utility to miniature-camera users in general, regardless of the make of equipment owned. Each section is prepared by an amateur or professional photographer and the material is based largely on the writer's personal experience. New material in this edition describes techniques and equipment developed since the previous edition.

SUSSMAN AARON

The amateur photographer's handbook revised by Bruce Downes. Third edition New York Thomas Y Crowell Company 1948 399 p illus. (part col d) 24 cm. $3 75 2218

Contents The growth of photography. The magic of light. All about the lens. The mystery of "f" The shutter What camera shall I get? Introducing your first camera. Film and exposure. The picture. Portraits and close-range work. Action and flash photography All about filters. How to take pictures of children. Developing. Printing. Fun with your camera. Lantern slides and transparencies. Three-dimensional pictures. What's wrong? Color photography Hints and suggestions. Supplemental glossary Index.

Note A practical and well-written manual designed to assist the amateur photographer obtain good pictures with a minimum of experience and equipment. The treatment is comprehensive rather than detailed, and in the descriptions of methods and techniques the theoretical aspects of the subject are kept to a minimum. In this edition the major revisions occur in the chapters on color and flash photography. New information regarding exposure, meters, film, and developing have also been incorporated into the original text. A glossary and several new illustrations have been added.

UNITED STATES. BUREAU OF NAVAL PERSONNEL

Photography Prepared by Standards and Curriculum Division Training, Bureau of

Naval Personnel. Navy training courses Edition of 1947 Published by Navy Department, Washington D C. Washington, D C. Government Printing Office, 1947 2 v illus. 20 cm. (Navpers 10371–10372) Paper v 1 $1 00 v 2 $0 75 2219

Contents. Volume 1, Fundamentals. The Navy photographer. Light and lenses. View cameras and hand cameras. Negative materials. Shooting techniques. Photographic chemicals and solutions. Film development. Contact and projection printing. Negative and print troubles. Flash photography Filters. Infrared photography Making identification photographs. Copying. Portraiture and group photography Lantern slides. Photography with Pola-screens. Quiz. Answers to quiz. Appendix. Index. *Volume 2 Specialized fields*. Color photography Aerial cameras. Aerial film. Aerial photography—the "know how" Stereoscopy—depth in pictures. Motion picture cameras. Motion picture processing. Motion picture techniques. Motion picture projection. Care of equipment. Administration, regulations, records. Quiz. Answers to quiz Index.

Note A two-volume handbook written in relatively simple language. *The volumes were prepared for classroom use by the Naval* Air Technical Training Command and the Training Publications Section of the Bureau of Naval Personnel. The work contains detailed directions and suggestions for all phases of naval photography and may be of value also to those outside the Navy who require *manual covering all the fundamentals of photography*. The 1947 edition differs from that of 1945 chiefly in its containing indexes not present in the original edition.

ZIELKE, MONI HANS, AND FRANKLIN G. BEEZLEY

How to take industrial photographs. New York McGraw Hill Book Company, Inc., 1948 113 p illus. 21 cm. $5.00 2220

Contents: Pictorial interest. Human interest News interest. "How-to" interest. Index.

Note More than 100 photographs of machines and the men or women operating them are presented here as examples of good illustrations for advertising layouts, sales-promotional bulletins, publicity releases, and instruction aids. Notes and diagrams explain camera placement, lighting, exposure, lens and film for each picture. Some additional suggestions for photographic procedure are provided in brief text.

FOOD TECHNOLOGY

ADVANCES IN FOOD RESEARCH Volume 1. Edited by E M Mrak and George F Stewart. New York Academic Press Inc. 1948 459 p illus 23 cm. $7.50 2221

Contents The physiology and chemistry of rigor mortis, with special reference to the aging of beef, by E. C. Bate-Smith. Factors influencing the vitamin content of canned foods, by L. E. Clifcorn. The physiological bases of voluntary food intake (appetite?) by Samuel Lepkovsky. Biochemical factors influencing the shelf life of dried whole eggs and means for their control, by Howard D. Lightbody and Harry L. Fevold. Factors affecting the palatability of poultry with emphasis on histological post-mortem changes, by Belle Lowe. Deterioration of processed potatoes, by A. Frank Ross. The influence of climate and fertilizer practices upon the vitamin and mineral content of vegetables, by G. Fred Somers and Kenneth C. Beeson. Nonenzymatic browning in fruit products, by Earl R. Stadtman. Microbial inhibition by food preservatives, by Orville Wyss. High-polymer pectins and their deesterification, by George L. Baker. Author index. Subject index.

Note. The first volume of what may prove to be a very useful series. As in several other series of the type, the purpose is to provide critical summaries of the published literature on selected topics of current interest in the field. Each of the ten papers in the present volume has been prepared by an expert and is accompanied by an extensive bibliography to which statements in the paper are keyed. The indexes are thorough and include the names of authors cited in the papers.

BLUMENTHAL, SAUL

Food products. Brooklyn Chemical Publishing Company Inc. 1947 986 p. 22 cm. $12.00 2222

Contents: Basic food ingredients. Milk and milk products. Confectionery, cocoa, coffee and tea. Dessert powders and puddings. Sauces, dressings and pickles. Fish, meat foods, health food, nuts, bread, soy products, baking powder. Pie fillings and pies. Cookies, doughnuts and cakes. Flavors, syrups and beverages. Fruits and vegetables. Canned goods. Jellies and preserves. Plant sanitation and sanitary food control. Composition of foods and prevention of caking. Preservation of foods by dehydration and freezing. Weights and measures. Chemical glossary. Abbreviations. Bibliography. Index.

Note (4549a) A revised and expanded version of the author's *Food manufacturing* (1941). It is particularly suited to executives of food manufacturing firms and to persons who are considering entering the business. It presents the manufacture of food as a series of operations governed by well-defined physical, chemical, and bacteriological principles. Hundreds of formulas for the preparation of food products on a commercial scale are included.

CRUESS WILLIAM VERE

Commercial fruit and vegetable products a textbook for student, investigator and manufacturer Third edition. New York McGraw Hill Book Company, Inc., 1948 906 p illus 23 cm. (McGraw Hill publications in the agricultural sciences R. A. Brink, consulting editor) $8.50 2223

Contents (*abridged*) Microorganisms in relation to fruit and vegetable products. Brief history of canning. Tin and glass containers. General considerations in establishing a cannery. Washing, blanching, and peeling fruits and vegetables. Grading fruits and vegetables for canning. Syrups and brines used in canning. Exhaust and vacuum. Canning of fruits. Pickling and canning of olives. Canning of vegetables. Spoilage of canned foods. Unfermented fruit beverages. Fruit and vegetable sirups and concentrates. Fruit jams, butters, preserves, and confections. Sun drying of fruits. Dehydration of fruits. Dehydration of vegetables. Vinegar manufacture. Pickles. Olive and coconut oils. Utilization of waste fruits and vegetables and disposal of wastes. Wines. Frozen-pack fruits and vegetables. Vitamins. Plant pigments and related compounds. Enzymes of fruits and vegetables. Plant sanitation. Index.

Note: (4115) A standard manual of information on commercial canning and preserving. Widely used as a textbook, it serves equally well as a reference book on the technology of the industry. The topics mentioned in the chapter titles are discussed in considerable detail, and in addition each chapter is accompanied by an extensive list of the related literature. Much new material is presented in this edition, which is about 100 pages longer than the second edition (1938)

CRUESS WILLIAM VERE

The principles and practice of wine making. Second edition New York The Avi Publishing Co., Inc., 1947 476 p illus. 20 cm. U.S $7.50 foreign countries, $8.00 2224

Contents: Wines and wine regions of the world. Wine types and composition of wines. Grape varieties. Preparation of yeast starters for wine making. Production of red table wine. Production of white table wine. Cellar operations. Aging of wine. Production of sherry. Port and other dessert wines. Sparkling wines. Fruit wines. Nonbacterial defects of wine. Spoilage and other microorganisms of wine and grapes. Brandies. Winery by-products. Laboratory examination of wines. State and federal regulations. Wine and health. The serving of wine and its use in cooking. Flow sheets. Index.

Note A practical text designed for the guidance of large-scale wine producers and their chemists. The various types of wines, their composition, properties, methods of production and equipment required are described, with emphasis on the methods employed in the California wine trade. In this edition the book has been so thoroughly revised as to almost constitute a new work. Modern techniques and new information regarding the basic principles of wine making have been incorporated; and new chapters have been added on cellar operations, brandy production, wine and health, and methods of serving wines. The contents of an earlier work *Laboratory examination of wines and other fruit products*, by the author and others, New York, 1934 are now included in revised form in the chapter on laboratory examination of wines.

DILLON CLYDE E

Meat slaughtering and processing. St. Louis Mo Meat Merchandising, Inc. 1947 307 p illus. 24 cm. $5.00 2225

Contents (*abridged*) Construction of slaughtering and processing facilities. Locating your plant. Beef slaughter. Hog slaughter. Calf and lamb slaughter. Inedible rendering. Lard rendering. Care of tools and equipment in the slaughtering room. Meat curing. Curing formulas. Smoking meat products. How to make fresh sausage. How to make smoked sausage. Poultry killing and processing. Drying and curing fish, shell fish and shrimp. Preparation of fish for zero storage. Curing and smoking turkeys. Care of machinery and tools. Sewerage disposal. Glossary. Index.

Note A practical guide which is addressed particularly to owners and managers of small meat-packing plants, especially plants operated in connection with frozen-food locker plants where meat is slaughtered and processed chiefly for individual customers who rent lockers.

ETCHELLS JOHN LINCOLN AND OTHERS

Bacteriological changes during the fermentation of certain brined and salted vegetables, by John L. Etchells Ivan D Jones and William M Lewis. Washington, D C. Government Printing Office, 1947 64 p illus 23 cm. (United States. Department of Agriculture. Technical bulletin no 947) Paper $0.15 2226

Contents Introduction. Salt preservation methods. Scope of present work. Procedure: Brining and salting treatments. Storage conditions. Bacteriological media and methods. Microscopic counts. Acidity and pH Results: Brined whole green beans, unshelled lima beans, and unshelled peas. Mixed lot of brined whole vegetables. Brined whole wax beans Brined whole green beans. Brined whole carrots. Lettuce kraut. Dry-salted cut green beans. Brined and dry-salted white corn. Brined and dry-salted yellow corn. Brined and dry-salted butter beans. Dry-salted ripe tomatoes. Brined and dry-salted okra. Brined and dry-salted shelled green peas. Brined leafy vegetables. Brined and dry-salted celery Discussion. Summary and conclusions. Literature cited. Appendix: Bacteriological media and methods: Coliform bacteria. Acid-forming bacteria. Salt-tolerant cocci. Yeasts. Mycoderma (film-forming yeasts) and molds. Obligate halophiles.

Note During series of experiments in 1942 and 1943 total of 87 fermentations of various vegetables were studied, and the results with statistical data are given in this report. In addition to the bacteriological studies, observations on the general quality of the brined and salted vegetable material were made at intervals during the fermentation and subsequent storage period. The purpose of the research was to obtain clearer insight into the nature of brine flora of vegetable fermentations by differentiation of the total populations into predominating types or groups of microorganisms.

GORTNER WILLIS ALWAY AND OTHERS

Principles of food freezing by Willis A. Gortner Frederick S Erdman and Nancy K. Masterman edited by L. A Maynard. New York John Wiley & Sons Inc. 1948 281 p. illus. 22 cm. $3 75 2227

Contents (abridged) A foreword, by Leonard A. Maynard. Part The product—Frozen food An introduction to food freezing. The raw material. Processing for freezing. Packaging for freezing. Freezing rates and food quality The storage of frozen food. Cooking frozen foods Part The consumer and his needs Home freezing The patron and the community locker plant. Part III. The engineering of food freezing: The role of food in engineering design. Construction of low-temperature space. Refrigeration for low temperatures. The freezing process. Freezing equipment for the home. Locker plants. Freezing for commerce. Author index. Subject index.

Note. A biochemist and food scientist, an engineer and home economist collaborated on survey of community and home frozen-food services, equipment, and operation, and present in this book digest of their findings and of the investigations of others. The result is not handbook of the details of processing but rather discussion of the conditions that insure nutritious, palatable and economically produced frozen food. The basic principles in selecting, processing, freezing, and storing food which will apply alike to large-scale commercial freezing plants, community lockers, and farm and home units are outlined Consideration is given to the human as well as to the mechanical factors for example, there is considerable discussion of doors and lids on home freezers. Advantages and disadvantages of methods, equipment, and management are discussed differing opinions are objectively considered technical points are explained.

HALLIDAY EVELYN GERTRUDE, AND ISABEL TILTON NOBLE

Hows and whys of cooking. Third revised edition. Chicago The University of Chicago Press 1946 328 p. illus 21 cm. $3 75 text ed., $2 75 2228

Contents Vegetables. Factors hich contribute toward success in the preparation of muffins, cakes, biscuits, and pastry Muffins Cakes containing shortening Angel-food and sponge cakes. Baking-powder biscuits. Pies. Candy Ice-cream. Beef. Meal planning. Index.

Note (4560) This work is successful combination of chemistry and traditional cook book material. Its distinguishing quality is that cooking is viewed as an application of science and the various manipulations and processes are explained and described as carefully as the procedures outlined in chemistry laboratory text. A considerable part of the space is given over to tested recipes. The book is used in homes, commercial food establishments, and in college courses in domestic science. The present edition contains newly added information on baked foods, the cooking of vegetables, and number of new recipes.

HEWSTON, ELIZABETH M , AND OTHERS

Vitamin and mineral content of certain foods as affected by home preparation. By Elizabeth M Hewston, Elsie H. Dawson, Lucy M Alexander, and Elsa Orent Keiles, Bureau of Human Nutrition and Home Economics Agricultural Research Administration. Washington, D C. Government Printing Office 1948 76 p illus. 26 cm. (United States. Department of Agriculture. Miscellaneous publication no 628) Paper $0.30. 2229

Content Purpose and plan of study Preliminary studies on 20 common foods: Preparation, cooking, sampling. Methods of analysis for 20 foods. Results on 20 foods. Summary and conclusion on 20 foods. Potatoes. Carrots. Green peas. General summary Literature cited. Appendices: A simple and rapid method for moisture determination using infrared lamps. Extraction of riboflavin from navy beans. Interfering substances in the determination of riboflavin in fresh and cooked peas.

Note: What constitutes good cooking from nutritive standpoint? T help answer this question the study reported in this pamphlet was made. Preliminary studies were made on the cooking of 20 foods, including vegetables, meats, poultry breads, and cereals methods of preparation and cooking in general home use were employed. Measurements were made of loss from cooking of selected nutrients, including ascorbic acid, thiamine, nicotinic acid, riboflavin carotene, and minerals. The results are presented both in text and in tables. More comprehensive studies were made of potatoes, carrots, and peas, and the results similarly reported.

JACOBS MORRIS BORIS

Synthetic food adjuncts synthetic food colors flavors essences sweetening agents, preservatives stabilizers, vitamins and similar food adjuvants. New York D Van Nostrand Company Inc., 1947 335 p. illus. 24 cm. $5 50 2230

Contents Introduction. Synthetic coloring matters. Use of synthetic food colors. Taste, odor and flavor Flavoring materials: acids, alcohols, and hydrocarbons Flavoring materials: esters Flavoring materials: aldehydes, ketones and ethers. Flavoring materials: organic compounds with more than one functional group. The use of flavoring materials. Chemical preservatives and stabilizers. Vitamins. Appendix. Index.

Note Aside from the one chapter on addition of vitamins to food, the author here deals with three types of synthetic food adjuncts those added to give color and improve appearance, those used to add or enhance the flavor and those used for preservative purposes. He discusses the chemical composition and properties of such products, their specifications as set down by the United States Food and Drug Administration and their methods of preparation and use. Numerous formulas are scattered through the text, and those for flavor ester mixtures are collected in an appendix. Selected references are given at the end of most chapters. The writer is chief of the Chemical Laboratory of the New York City Bureau of Food and Drugs.

JENSEN LLOYD B

Microbiology of meats. Second edition. Champaign Ill. The Garrard Press, 1945 389 p illus 23 cm. $5 50 2231

Contents Introduction and history Some effects of sodium nitrate on bacteria in meat. Gaseous fermentation in meat products by the genus Bacillus. Bacteriology of green discolorations in meats. Action of microorganisms on fats. A study of hams—curing—ante-mortem and post-mortem studies on the bacteriology of normal tissues of swine. Microbiology of beef. Bacteriology of sausage. Microbiology of bacon Post-mortem preservation of poultry quality Control of microorganisms. Bacteriology of spices, salt, waxes paper, wood, and ice. Index of authors. Index of subjects.

Note. (4567) This book represents an expansion of the first edition (1942) the additional material consisting largely of recent researches in the subject with especial attention to the chem-

teriologic problems of meat preservation in war time (meat-ball handling, dehydration, etc.) The author is Chief Bacteriologist for Swift and Company and has prepared his text for technicians in similar plants and for advanced students in applied bacteriology. Laboratory techniques are fully described and findings are carefully tabulated. There are also diagrams, plates, and bibliographic footnotes.

JORDAN, STROUD AND KATHERYN E. LANGWILL

Confectionery analysis and composition Chicago The Manufacturing Confectioner 1946. 116 p 23 cm. (Confectionery studies. No. 4—1946) $3.50 2232

Contents Part I, Analytical methods: Moisture. Ash (mineral matter) Sugars. Starches. Proteins. Fats. Colloidal materials. Nuts and fruits. Acids. Incidental materials. Part II, Reconstruction of formulas from analytical data: Hard candy Sugar cream (fondant) Fudge. Caramels and taffies. Marshmallow—hard and soft. Nougat. Gums and jellies. Coated candies. Appendix. Index.

Note: The first ten chapters comprising Part I of this confectioners' handbook deal with the laboratory methods of chemically analyzing candy to determine its basic ingredients. The remaining and largest part of the work is concerned with the reconstruction of candy formulas from analytical data. In this section recipes are given for making hard candy fondants, fudge, caramels and taffies, gums and jellies, and coated candies (chocolate and otherwise) Composition tables for the various confections are conveniently grouped in the appendix.

KIK MARINUS CORNELIUS AND R. R. WILLIAMS

The nutritional improvement of white rice, by M. C. Kik and R. R. Williams for the Committee on Cereals Food and Nutrition Board. Washington D C Published by The National Research Council, National Academy of Sciences 1945 76 p illus. 25 cm. (National Research Council. Bulletin. Number 112 June, 1945) Paper Gratis. 2233

Contents: Introduction. Rice production and consumption. Rice cookery. The nutritive qualities of rice. Polished rice and beriberi. Proposed corrective measures against beriberi. Commercial milling of rice. Deterioration of rice in storage. Parboiling of rice. Rice conversion. Artificial enrichment of rice. Résumé. Appendix: Effect of storage on thiamine in rice.

Note. A critical discussion of current methods of milling rice and of the various means which have been developed for improving the quality of milled rice. Some of the data presented are taken from the published literature and others have been derived from investigations made by the authors. The chief measures discussed for the improvement of milled rice or for correcting its nutritional deficiencies are: undermilling, greater use of some form of parboiled rice, artificial enrichment, and the incorporation of vitamins in the salt used in cooking and flavoring rice and other foods.

LAGER, MILDRED

The useful soybean a plus factor in modern living. New York McGraw Hill Book Company Inc., 1945 295 p illus 22 cm. $3.50 2234

Contents Agriculture' Cinderella. World-wide use of soybeans. Soybeans and industry Nutritional nuggets. From soup to nuts. The blazed trail. The challenge of nutrition. Our wonder crop. Soybeans and the farmer. Tomorrow A few suggestions for better living. Recipes Index. Index of recipes.

Note: While the author's interest is primarily in the nutritional value of the soybean as evidenced by her collection of over three hundred and fifty recipes for appetizers, entrees, and desserts which constitute the latter half of this book, she has also contributed information on the history of the culture of the bean, the development of important production in the United States, the extensive research work of the soybean processors, and the numerous industrial applications developed in the last fifteen years.

MATLACK, MARION BROOKS

Instructions on processing for community frozen-food locker plants Washington D C Government Printing Office 1946 52 p illus. 26 cm. (United States. Department of Agriculture. Miscellaneous publication no 588) Paper $0.20 2235

Contents (abridged): Preservation of foods by freezing. Processing instructions for fruits. Thawing and using frozen fruits. Processing instructions for vegetables. Thawing and cooking frozen vegetables. Preparation of meat for freezer storage: Selection. Slaughtering. Chilling. Aging. Cutting. Wrapping. Labeling. Freezing. Storage. Thawing and cooking frozen meat. Poultry Eggs. Fish. Miscellaneous products. Freezing of cooked food. Care of frozen foods after removal from locker. Sanitation. Packaging materials. A partial list of manufacturers of supplies for frozen food lockers: Bags, boxes, papers. Cartons and containers. Stockinet. Heat-sealing equipment. Selected references.

Note. Intended for the housewife as well as for locker-plant supervisors, this pamphlet contains complete and detailed information on what to freeze and how to prepare it. It includes general tips on such matters as maximum length of time frozen products should be left before using, methods of defrosting, and what products are not suitable for preservation by freezing. Separate instructions are given for each variety of fruits and vegetables.

PARKER, MILTON E.

Food-plant sanitation New York McGraw Hill Book Company Inc. 1948 447 p illus. 23 cm. (McGraw Hill series in food technology L. V Burton chairman) $6 00 2236

Contents: Role of sanitary practice in quality control. Sanitary aspects of buildings and equipment. Sanitary aspects of water supply. Wastes disposal and utilization. Establishment and development of sanitary practices. Employee training in sanitary practices. Maintaining sanitary practices. Salient legal aspects of pest control. Safe and effective insect control. Safe and effective rodent control. Fungicides, germicides, and sanitizers. Effective detergency. Effective cleaning practice and operations. Sanitary packaging practice. Sanitary aspects of packaging materials. Appendix: Excerpts from U. S. laws and regulations. Index.

Note. A practical guide to the techniques of sanitary food handling, from the time the raw material is received at the factory until it is processed and packaged ready for delivery. The book is based on study of current practices and will be of value to anyone connected with the food industries. It discusses general methods for establishing and maintaining sanitary conditions in food plants, and offers specific instructions for pest control measures and the provision of physically clean and sanitary food contact surfaces. The discussions of the relative effectiveness of various insecticides, detergents, cleansers, and packaging materials now on the market are useful features of the book.

SHERMAN HENRY CLAPP

Food products. Fourth edition New York The Macmillan Company 1948 428 p illus. 22 cm. $4.80 2237

Contents: The chief constituents and functions of food. General principles of food, control and management. Milk. Milk products other than butter. Eggs. Meats and meat products. Poultry game, fish, and shellfish. Grain products. Vegetables. Fruits. Nuts. Edible fats and oils. Sugars, sirups, and confectionery. Food adjuncts, unclassified food materials, and some foods. The problem of the best use of food—with some aspects of food economics. Appendices: Simple statistical treatment of data. Food values and their variations. Index.

Note: A broad study of foods and food products. The typical chapter deals with single type of food and includes: (1) an account of its production and market preparation, plus details of marketing and storage methods, and discussion of its relative economic importance, (2) sanitation, inspection and purity standards, (3) general composition, mineral content, and nutritional values, (4) special characteristics, digestibility, nutritive value, and dietary importance. Several pages following each chapter are devoted to recommended references and suggested readings covering all aspects of the subject—nutritional, chemical, and technological. Revision of

these reading lists and modification of the tabulated data concerning amino acids in food proteins represent the major changes in this edition. The volume is designed for professional dietitians, college students of nutrition, and the advanced general reader.

SPARKES BOYDEN

Home freezing & storage of food zero storage in your home. Revised edition 1948 Garden City New York Doubleday & Company Inc. 1948 175 p illus 21 cm. $3 00 2238

Contents Part One A grocery store in your home. What does freezer cost? The locker plants. Mrs Spencer's acre. The first freezer in Kalamazoo. Emphasis on better eating. The Fyler family Revolution in Connecticut. The freezer in city homes. What is security? Progress from poverty Sharing the work. Yesterday's and tomorrow's freezer. Part Two Operation and care. Equipment for freezing. Planning. Fruits. Vegetables. Meat and poultry Fish and game. Dairy products and eggs Cooked foods. Index.

Note (4571) A successful popular book on the use of freezing and low temperature storage as means of preservation f food in the American home. Part recounts with enthusiasm the convenience and economy hich the author and others have found in the operation of family-sized food freezing and storage cabinets. Part offers advice on the choice of freezing and storage units, packaging materials, and on the preparation of foods for freezing at home or at locker plants Useful revisions were made in the work in preparing it for this edition.

SPENCER GUILFORD LAWSON AND GEORGE P MEADE

Cane sugar handbook a manual for cane sugar manufacturers and their chemists Eighth edition revised, rewritten, and enlarged. New York John Wiley & Sons Inc. 1945 834 p illus. 22 cm. $8.50 2239

Contents (abridged) Manufacture of raw sugar Economic phases of the sugar industry Raw material. Extraction of the juice. Steam plant and fuel Purification of the juice. Chemical reagents used in sugar processes Evaporation and heating Preservation of the juice and sirup during shutdowns Crystallization of the sugar Purging, packing, and warehousing the sugar Blackstrap molasses and edible sirups. Keeping and refining qualities of raw sugar Sugar refining. Sugar analysis and chemical control of the factory: Sugars and other constituents of the cane. Optical methods in sugar analysis Double polarization methods—Clerget sucrose Chemical methods in sugar analyses Hydrogen-ion (pH) control. Color and turbidity in sugar products Sampling and averaging. Analysis of the sugar cane Analyses of the juice. Analysis of the sirup, massecuites, and molasses Analysis of sugars Analyses of the filter press cake. Analysis of the bagasse Checking factory wastes and boiler feed water for sugar Definitions and expressions used in sugar house work. Chemical control Sugar house calculations. Methods of cane purchase. Fermentation and microorganisms in sugar manufacture and refining Analysis of limestone lime, sulfur and sulfurous acid. Analyses of flue gases Special reagents Reference tables. Index.

Note A technical survey of the various phases of cane sugar manufacture and refining, written primarily for the control chemist. This edition has been considerably enlarged with introduction of the material on the theory and practice of crystallization in motion, black-strap molasses and edible sirups, and the consumption of refined sugars. Other chapters on methods of cane purchase, composition of cane, uses of bagasse warehousing of sugar and vegetable carbon processes in refining have been revised and expanded.

STOUT GERALD JOHN

The home freezer handbook with drawings and sketches by Philip F Hallock. New York D Van Nostrand Company Inc. 1947 345 p. illus. 22 cm $3 95 2240

Content (abridged) Section A, General considerations: How much freezer space does family need? What is the cost of frozen foods? Advantages f building freezer Section B Buying factory-built freezer Requirements for satisfactory freezer Types of factory-built freezers Section C, Building home freezer Selecting good location for the home-built freezer Types of freezers for home construction Some unusual types of freezers, practical and otherwise. Constructing the freezer box. The how and why of vapor sealing. Insulation for use in home-built freezer. The refrigeration machinery and equipment. Installing the coil and equipment. Section E, Building combination storage and freezer Constructing small cold storage room. The kitchen refrigerator as part of the cold room. Planning for storage and freezing equipment in new or remodeled homes. Section F Preserving foods by the freezing method. Planning the season's supply. Packages and packaging. Preparation of fruits for freezing. Preparation of vegetables for freezing. Preserving meats by freezing. Thawing, cooking, re-freezing. Selling home-frozen food products. Locker plants in relation to home freezer owners. Index.

Note. The home freezer is refrigeration unit that is designed to freeze food materials and to store them at temperatures somewhat below freezing until they are needed for consumption. This work provides authentic, practical information on such freezers and on the freezing and storing of foods in them. The author does not believe that the use of freezers by city dwellers who must purchase all their food can be justified economically: consequently the book is aimed chiefly at farm and suburban families who have access to low-cost seasonal food supplies. The directions for the building of freezers and for the pre-freezing preparation of foods are explicit and detailed.

TRESSLER DONALD KITELEY, AND CLIFFORD F EVERS

The freezing preservation of foods Second edition revised and enlarged. New York The Avi Publishing Company Inc., 1947 932 p. illus. 21 cm. U.S $10 00 foreign countries, $10.50 2241

Contents (abridged) Food freezing—present importance and potentialities Cold storages, sharp freezers and sharp freezing Quick freezing and the quick freezing systems. Freezing cabinets and walk-in freezers. Frozen food locker plants. Packaging materials and problems Adaptability of vegetables and vegetable varieties to freezing. The freezing of vegetables Adaptability of fruits to freezing. The preparation for freezing and freezing preservation of fruits. The manufacture and freezing of fruit juices The preparation of foods for home freezing The preparation and freezing of meat—poultry—fish—shellfish. The freezing of dairy products. Precooked frozen foods. The storage, transportation and marketing of frozen foods The nutritive values of frozen foods. The cooking and serving of frozen foods. The microbiology of frozen foods. The importance of quality control and standards in the frozen foods industries. Appendix. Index.

Note (4578) The standard presentation of this subject for use in the commercial industry In spite of the fact that the emphasis is on commercial practices, the book does contain directions which are presented simply enough so that they can be followed by householders interested in full-scale freezing for their own use. The present edition of the book represents thorough revision of major parts of it. Statistical information has been brought up to date, the bibliographies have been revised, and there are several new chapters. Certain older chapters, such as the one dealing with freezing cabinets, have been extensively revised. The appendix includes range of useful information on such topics as standards for frozen foods, tests for quality and laws relating to the operation of frozen food locker plants.

TURNBOW GROVER DEAN, AND OTHERS

The ice cream industry by Grover Dean Turnbow Paul Hubert Tracy and Lloyd Andrew Raffetto Second edition. New York John Wiley & Sons, Inc., 1947 654 p illus. 24 cm. $6.00 2242

Contents The history and development of the ice cream industry Classification and recipes. Composition of the mix. Selection of milk products. Sweetening agents. Mix stabilizers. The use of eggs in ice cream. Standardization of ice cream mixes. Mix processing. Freezing ice cream with the batch freezer Freezing ice cream with the continuous freezer Flavoring ice cream Hardening ice cream. Packaging and delivering. Ice cream specialties and novelties. Sherbets and ices Sanitary control of ice cream plants Washing and sterilizing. Food value of ice cream. Ice cream defects Physical and chemical properties of ice cream mixes. Merchandising. Plant costs and records. Engineering in the ice cream plant. Laboratory tests used in the ice cream industry Appendix. Index.

Note A comprehensive treatise on commercial methods of manufacturing and marketing ice cream. It is suitable for use both as text in organized courses in schools and as reference manual

in the industry. The present edition represents an extensive reworking and enlargement of the first edition published in 1928. New material has been added on the composition and standardization of mixes, the selection of ingredients, freezing, hardening, packaging, delivery, sanitary control, and merchandising. Reference lists of related literature, some of them containing as many as 150 entries, are appended to most of the chapters. The authors are former or present university professors.

UNITED STATES AGRICULTURAL RESEARCH ADMINISTRATION

Experimental compression of dehydrated foods. Washington, D. C. Government Printing Office, 1948. 57 p. illus. 26 cm. (United States. Department of Agriculture. Miscellaneous publication 647) Paper $0.25 2243

Contents: Introduction. Definitions of terms. General problems in food compression. Procedures and equipment. Results of compression studies on specific dehydrated vegetables. Compression of specific dehydrated fruits. Compression of spray-dried whole egg powder. Results of compression tests on cereal and soya flours. Summary of compression conditions for specific foods and volume reductions effected by compression. Storage behavior of compressed food products. Preliminary experiments on the use of in-package desiccants with compressed dehydrated foods. Precautions compression. Unsolved problems. Literature cited.

Note: This publication reports the results of investigations on compressed dehydrated foods undertaken during World War by the Bureau of Agricultural and Industrial Chemistry, the Bureau of Plant Industry, Soils, and Agricultural Engineering, and the Bureau of Human Nutrition and Home Economics. Problems of handling, transportation, and storage of foods for overseas shipments led to the need for reducing the bulk of such foods as far as possible. The experiments were carried on over two-year period. The results form groundwork for further advances in food-compression techniques.

UNITED STATES PUBLIC HEALTH SERVICE. SANITARY ENGINEERING DIVISION

Manual of recommended practice for sanitary control of the shellfish industry. Recommended by the United States Public Health Service 1946. Prepared by direction of the Surgeon General. Washington, D. C. Government Printing Office, 1946. 44 p. illus. 23 cm. (United States. Public Health Service. Public health bulletin no. 295) Paper $0.15 2244

Contents: Introduction. General administrative procedure. Definitions. Growing areas. Harvesting and handling. Preparing for market; processing. Shucking and packing plant. Shucking room. Packing and shipping room. Index.

Note. A guide for state and local health authorities who exercise supervision over the sanitary quality of shellfish shipped in interstate commerce. It enumerates and describes the specific items of sanitation recommended.

WINTON, ANDREW LINCOLN, AND KATE BARBER WINTON

The analysis of foods. With 208 illustrations. New York, John Wiley & Sons, Inc., 1945. 999 p. illus. 22 cm. $12.00 2245

Contents: Introduction. Part I, General microscopic methods. General physical methods. General chemical methods: Organic elements. Constituent groups—water (volatile matter); protein; fat (ether extract); nifext (nitrogen-free extract); fiber; ash. Water. Protein. Fat. Nifext. Fiber. Ash. Alcohols. Vitamins. Natural colors. Artificial colors. Chemical preservatives. Part II, Special methods: Cereal foods. Fatty foods. Vegetable foods. Fruit foods. Saccharine foods. Alcoholic beverages. Dairy products. Animal foods. Alkaloidal products. Food flavors. Leaven. Salt. Index.

Note: A comprehensive manual of both official and non-official chemical methods for qualitatively and quantitatively determining the basic constituents of foods. The necessary laboratory apparatus and stock reagents are discussed; and physical methods of analysis such as those involving the use of the microscope, refractometer, polariscope, and colorimeter are also mentioned. Procedures are described in great detail to enable the laboratory worker to follow them correctly. Some very common methods and tests that are adequately described in other standard analytical manuals, for example, the Liebig method for determination of carbon and hydrogen, are not covered. Extensive lists of the international literature appear throughout the book and the text is keyed to them. The work is designed as reference book for professional analytical chemists and as textbook for advanced chemistry students.

MISCELLANEOUS TECHNOLOGY

GENERAL

Berg Norbert J

Wetcleaning. Silver Spring Maryland National Association of Dyers and Cleaners of the United States and Canada, 1945 288 p. illus. 20 cm. $3 50 2246

Contents: The wetcleaning process. Equipment. Water. Soaps and synthetic wetcleaning detergents. Bleaches. Alkalies and acids. Sizings, starches, and water repellents. Daily routine, classification of garments. Men's suits (except silks) Dresses (except white) White garments. Raincoats. Garments and articles that require special handling. Bathing out stains. Household textiles.

Note A practical manual written for workers in drycleaning plants. It is concerned with the fabric cleaning processes in which water is used in preference to the usual drycleaning substances. Detailed procedures are given for the wetcleaning of wide variety of garments, and there is also information on the use and care of equipment.

Hankerson Fred Putnam

The cooperage handbook. Brooklyn N Y Chemical Publishing Co., Inc. 1947 182 p. illus. 22 cm. $3 75 2247

Contents The wooden barrel in history Cooperage in America. The tight barrel. The slack barrel. The beer barrel. General barrel information.

Note Based on survey of the related literature, this brief volume deals principally with the methods of making wooden barrels. Both types of barrels—those for holding liquids and those for holding dry materials—are covered, and details are given of cooper's tools, the selection of barrel-making materials, and the heading, handling, storage, and care of barrels Various specifications, such as those of the Interstate Commerce Commission, are included, and there is glossary of terms, but no bibliography

Hjorth, Herman

Principles of woodworking. Revised and enlarged. Milwaukee, Wis The Bruce Publishing Company 1948 445 p illus. 24 cm. $2.88 2248

Contents. History of woodworking tools. Hand tools. Machine tools. The sharpening of tools. Planing and squaring to dimensions. Grooved joints. Dowel joints. Lap or halving joints Mortise-and-tenon joints. Miter joints. Dovetail joints. Miscellaneous constructions. Gluing and clamping. Metal fastenings. Wood turning. Surface decoration. Upholstery Wood finishing. Wood. Applied projects.

Note (4447b) A manual for vocational and secondary school students, and for adults with home woodworking as hobby The operation and use of the principal hand- and machine-woodworking tools are described clearly and in detail, with emphasis in their application to cabinetmaking. In this edition several of the chapters, such as those dealing with machine tools and wood turning, have been expanded, and new chapters have been added on the history of woodworking tools and the making of motor joints.

Hunter, Dard

Papermaking the history and technique of an ancient craft. Second edition, revised and enlarged. New York Alfred A. Knopf 1947 611 p. illus. 24 cm. $12.50 2249

Contents (*abridged*) Writing substances of the ancients. Ts'ai Lun and the invention of paper The first text printing upon paper The hand-mould. The maceration of materials for papermaking. Early papermaking processes and methods. Paper: sacred material. The paper and the papermakers of Europe and America during the early years of printing. Ancient watermarks. Latter-day watermarks. Papermaking materials. The paper-machine and its inventory Printing revolutionizes papermaking. Handmade papers vs machine-made papers. The watermarking of machine-made papers and the use of watermarks in detecting forgery Present-day papermaking by hand in Europe. Chronology of papermaking, paper and the use of paper. Bibliography Notes. Index.

Note (4630) A comprehensive history that deals mostly with papermaking techniques but also pays some attention to the social and cultural importance of paper as writing and printing material. It is intended for students of cultural history and general readers. The chapters on the watermarking of machine-made papers and present-day papermaking by hand in Europe are new in this edition, and certain other parts of the book, including the bibliography have been revised or expanded.

Phillips Charles John

Glass the miracle maker its history technology, manufacture and applications. Second edition. New York Pitman Publishing Corporation 1948 429 p. illus. 24 cm. $6.00. (Pitman books on industrial materials and processes Alexander Klemin, advisory editor) 2250

Contents Part I, History and technology: The glass of years gone by Glass today The chemistry of glass. The mechanical properties of glass. Other physical properties of glass. Part II, Manufacture Materials handling. Fuels, refractories, furnaces, and the melting process. The principles of glassworking Glassworking machinery Finishing, annealing, decoration, and inspection. Part III, Applications: Glass in architecture and building construction. Glass in the home Glass in the electrical industry Glass in illumination. Glass in manufacture. Glass in science and research. Fiber glass Index.

Note. (4594) The first edition of this work (1941) established it as useful survey of the properties, manufacture and uses of glass. Not an account of "miracles" despite the title, it was designed primarily to give nontechnical information to such persons as architects and designers interested in glass as decorative or structural material. It proved handy also for the enlightenment of curious general readers. The book is essentially the same in this edition. Some important revisions, for example the rewriting of the material on glass-to-metal seals, have been made but the proportion of text altered is small. Nevertheless, the type has been reset, and the open book now presents more attractive appearance.

Rawlings Arthur Lionel

The science of clocks and watches. Second edition. New York Pitman Publishing Corporation 1948 303 p illus. 23 cm. $5.00 2251

Contents Time and its measurement. Oscillatory motion. The pendulum. Dissipation of energy by swinging pendulum. Escapements and other impulse devices Electric pendulum clocks Escapement errors. Balance-wheel clocks and watches Isochronism of balance-wheel movements. The marine chronometer The four-hundred-day clock. Gear trains. Weights, mainsprings, and their accessories. Friction and lubrication. Striking clocks. Perpetual calendars On the selection and management of domestic clock. On the selection of good watch. Synchronous electric-motor clocks and the quartz

crystal clock. Harmonic motion in a cycloidal path and the calculation of circular error. Bibliography. Index.

Note. (4109a) In its second edition this work has been substantially revised and enlarged. There is new material on the photographic zenith tube, a summary of up-to-date records of the Shortt "free pendulum" clocks, the Hamilton marine chronometer, quartz-crystal clocks, the radio time signal service, and the poising of watch balances. The chapters on striking clocks and on perpetual calendar clocks are also new additions. The work remains a well-written, technical treatise that will be of primary interest to specialists and advanced hobbyists; but parts of it, for example the chapter on the selection and management of a domestic clock, are written for the layman.

SCOVILLE WARREN CANDLER

Revolution in glassmaking entrepreneurship and technological change in the American industry 1880–1920 Cambridge, Mass. Harvard University Press, 1948 398 p. illus 24 cm. $5 00 2252

Contents: The history of American glassmaking prior to 1880. Industrial growth, 1880–1920. The organization and history of the glass firms founded by the Toledo entrepreneurs, 1888–1920. Revolution in technology at Toledo. Technological innovation elsewhere. Control of labor and product markets. Foreign competition, domestic consumption, and plant relocation. The Toledo entrepreneurs. Appendix A: The general trend of glassworkers' wages, 1880–1920. Appendix B Some notes on technology Appendix C Some statistics on the financial success of the Toledo firms. Bibliography. Index.

Note: A carefully-documented history of the mechanization of the glassmaking industry in the United States of America. The greater part of the book is devoted to the competitive and economic aspects of the story but the sixth and seventh chapters especially cover the mechanical phases and describe the important inventions and machines.

KNOTS AND SPLICES

DAY CYRUS LAWRENCE

The art of knotting and splicing. New York Dodd, Mead & Company 1947 229 p illus. 27 cm. $6 00 2253

Contents: Introduction. Some elementary considerations. Knots and bends. Fixed loops. Running knots and nooses. Hitches and similar knots. Miscellaneous operations. Splicing. End knots and multi-strand knots. Turk's heads. Sennit. Bibliography and index.

Note. The excellence of the illustrations, picturing successive stages in the tying of knots and large enough to demonstrate the sequences clearly, distinguishes this book from other manuals on the same subject. The introduction includes a rather detailed account of the history and folklore of knots, information on the strength and security of knots, and explanations of technical terms used in the text. A revision and expansion of the author's *Sailor's knots* (1935) this edition describes many more knots, the introductory matter is rewritten, the bibliography (p. 209–221) expanded, and there are new and improved illustrations.

GRAUMONT RAOUL

Handbook of knots. New York Cornell Maritime Press 1945 194 p illus. 18 cm. $1 75 2254

Contents (abridged) Hitches. Bends. Sheepshanks. Bowlines. Simple knots. Mats and ornamental knots. General knots. Sennit braiding. Eye and net splices. Splices, grommets and whippings. General knot work. Barrel slings. Rope coils and gaskets. Rope ladder making. Methods of mousing hooks. Various types of pole lashings. Net making and mending. Blocks and tackles. Terminology. Care and handling of rope. Glossary. Index of knots. Index of knots by job and hobby.

Note: A pocket-size text on rope tying intended for both beginners and experts. It provides clear instructions on fashioning over four hundred knots useful in some fifty trades and sports. It is illustrated with more than forty full page plates of photographs showing the knots described. The index of knots by job and hobby is a particularly useful feature.

GRAUMONT, RAOUL AND ELMER WENSTROM

Fisherman's knots and nets. New York Cornell Maritime Press 1948 203 p illus 21 cm. $3 00 2255

Contents: Angler's and still fisherman's knots. Commercial fisherman's knots. Fishing traps and seines. Netmaking and repairing. Index.

Note: Four hundred and thirty-seven examples of knot tying and net making are included in this book for the amateur and professional fisherman. Photographs and diagrams supplement the text and clearly illustrate each of the described knots, nets, hitches, tackles, bends, and splices.

GRAUMONT, RAOUL, AND JOHN HENSEL

Splicing wire and fiber rope. New York Cornell Maritime Press 1945 114 p illus. 25 cm. $2.50 2256

Contents: List of illustrations. Wire splicing. Rope splicing. Terminology. Glossary. Index.

Note. This description of the varied methods used in splicing wire and fibre rope is well illustrated with numerous explanatory diagrams and photographs. The authors have attempted to include every known type of wire and rope splice. There is a short section on the reeving of blocks.

RAILROAD OPERATION

DRENNAN, CARL MAC

Modern railway air brakes a practical manual for the instruction of locomotive engineers and firemen Chicago American Technical Society 1947 68 p illus. 29 cm. $14.50 2257

Contents: Introduction—Air brake history. Air compressors and compressor governors. No. 6-ET locomotive brake equipment. No. 8-ET locomotive brake equipment. No. 14-EL brake equipment for Diesel-electric switching locomotives. The train air signal equipment. Inspection of locomotive brake and signal equipment. Train handling. Type AB freight car brake equipment. Type AB-8 automatic empty and load freight car brake equipment. Type AB-4-12 freight car brake equipment. Universal control passenger car brake equipment with U-12-BD universal valve. Type D-22-P passenger car brake equipment with D-22-AR control valve. Inspection and maintenance of freight and passenger car brake equipment. "HSC" high-speed brake equipment for types A, "B" and "C" Diesel locomotive units and cars with individual speed governor control.

Note: A collection in one volume of fourteen separate pamphlets, each of which is complete in itself. Airbrake equipment and its operation are described in detail and there are many reproductions of photographs and diagrams of modern American equipment. The work is intended for railroad operating men, especially men who are preparing themselves for promotion examinations.

FARRINGTON SELWYN KIP JR.

Railroading from the rear end. New York Coward, McCann, Inc., 1946 430 p. illus 22 cm. $5 00 2258

Contents (abridged) Introduction, by Major General C. P. Gross. Inductive train communication. Empire Builder. Centralized traffic control on the Santa Fe. Railroading on the Boston & Maine. The New York Central's 4-1-class Niagara. On the Chesapeake & Ohio. The Southern Pacific. The Burlington's panoramic coach. The Norfolk & Western. The voice of the Santa Fe. The American Locomotive Company. The Rio Grande. The Baltimore & Ohio. The Great Northern's ore move. Tailoring the tracks on the New York Central. The "CTX." Snow-fighting on the Milwaukee. The Atlantic Coast Line. The Erie. The Boston & Maine's Yankee Empire. Flagman of the Chicago & North Western. Business car on the Santa Fe. Black diamonds of the Norfolk & Western. Manifest train on the C. & O. The S. P.'s biggest rock. The Burlington. "Speed specials" of the Santa Fe. Roller bearings for freight cars. The road of Passengers. Lorain military railroad. Milk for ten million. Santa Fe wheel kin. Index.

Note. A collection of readable and interesting essays on engineering and management aspects of contemporary railroading in the United States of America. The title indicates that the viewpoint is the caboose or "hind end" of trains. It is intended for general reading, but many technical matters, such as subsurface grouting of roadbeds, the virtues of roller bearings, etc., are discussed. The book is intended as a companion to the author's *Railroading from the head end*, Garden City: Doubleday and Company 1943

FOELL, CHARLES FRANCIS, AND M E THOMPSON

Diesel-electric locomotive. New York Diesel Publications, Inc. 1946 688 p illus (part col d) 24 cm. $5.00 2259

Contents (abridged) History and development. Advantages of Diesel-electric locomotive. Classes of locomotives—construction and component parts. The engine-generator assembly Traction motors and final drive. Propulsion control—main and accessory Locomotive selection. The Diesel cycle. Locomotive Diesel engines. Fuel systems. Lubricants and lubrication. Trucks—brakes Maintenance General. Diesel engine. Generators and motors. Auxiliary electrical and mechanical items.

Note The material presented in this survey of Diesel locomotive manufactures in the United States of America will be useful to two groups of readers: owners and managers, and operating and maintenance men. Although the title indicates that the scope of the book is limited to Diesel-electric locomotives, some material is included on Diesel-powered locomotives with mechanical and hydraulic drives. The book is liberally illustrated, chiefly with photographs of actual equipment. There is no bibliography Advertisements of equipment are included.

KIEFER PAUL WALTER

A practical evaluation of railroad motive power New York Simmons-Boardman Publishing Corporation, 1948 65 p. illus. 22 cm. $2.50 2260

Contents: Foreword, by Joseph B. Eastman. Introduction. The reciprocating-type steam locomotive. Other coal-fired steam locomotives The gas-turbine locomotive Electric locomotives. Diesel-electric locomotives Motive-power potentialities. Conclusions.

Note: The chief engineer in charge of motive power and rolling stock of the New York Central System discusses the relative merits of modern steam, electric, and Diesel locomotives. His conclusions, and his examination of the characteristics, advantages, disadvantages and potentialities of each type of motive power are based largely on studies carried out by the New York Central

RAYMOND WILLIAM GALT AND OTHERS

Elements of railroad engineering, by the late William G Raymond, Henry E Riggs and Walter C Sadler Sixth edition New York John Wiley & Sons, Inc. 1947 442 p illus. 23 cm. $5 00 2261

Contents (abridged) Part I, The railroad industry Growth of the American railroad system and development of regulation Competing transportation agencies. Character of high speed streamlined railway service. Present-day transportation problems. Railroad valuation Part II, Permanent way: Alignment. Rails. Crossties. Ballast and roadbed. Turnouts. Side tracks and yards. Signals and signaling. Part III The locomotive and its work The Diesel-electric locomotive. The steam locomotive. Locomotive and grade problems. Effect on operating expenses of change in the number of trains, the tonnage remaining constant. Effect of distance, rise and fall, and curvature on train mile cost Part IV Railroad location, construction, and betterment surveys: Reconnaissance or first survey Location survey Construction survey Betterment survey Appendix Tables for finding tractive effort. Index.

Note (4440) The first edition of this work appeared in 1911 hence it has held its place as standard text for engineering college courses during four decades. The pattern and scope of the work have not been changed in this edition, but there has been considerable revision together with additions of new material. Part in particular has been thoroughly revised to incorporate the latest data on sources of revenue and costs of operation. In other parts there is new material on streamlined trains, layout of curves and grades, and construction of track.

VAN METRE, THURMAN WILLIAM

Trains tracks and travel. Seventh edition. New York Simmons-Boardman Publishing Corporation, 1946 423 p. illus 24 cm. $3.50 2262

Contents Clearing the way Our steam railroads The railroad track. The steam locomotive. Electric locomotives, gasoline and oil motors. Freight cars. Passenger train cars. Streamliners on parade. Passenger stations and terminals. Freight terminals. The operation of trains. How our railroads went to war Index.

Note: (4441) A popular book for young people, railroad fans, and general readers. It provides simple, expertly written account of American railroads, their history building, equipment, and operation. A good deal of technical information for popular book is introduced but is so handled that most readers are able to grasp it. In this revision the principal changes are a number of new illustrations, discussions of new developments such as aluminum freight cars, radio communication in train and yard operation, the Pennsylvania Railroad's new steam turbine locomotive, and summing up of the railroads' contribution to the American effort in World War II. The author is Professor Emeritus of Transportation at Columbia University A new edition is scheduled for publication in 1949.

TEXTILES

AMERICAN VISCOSE CORPORATION TEXTILE RESEARCH DEPARTMENT

Rayon technology, handbook for textile mills New York McGraw Hill Book Company Inc., 1948 273 p. illus. 23 cm. $3 75 2263

Contents: Rayon staple on the cotton system. Rayon staple on the worsted system. Rayon staple on the woolen system. Rayon from yarn to fabric. Standard rayon fabric constructions. Rayon in knitting mills. Rayon dyeing and finishing. Index.

Note: Here are discussed in detail the methods of processing rayon staple into yarn on machinery originally designed for handling cotton, silk, or wool the preparation of rayon yarn for weaving and knitting operations and the calculations in producing the finished fabric. All phases of rayon manufacture including spinning, throwing, weaving, knitting, dyeing and finishing are covered The book is intended for mill men and others who already have knowledge of the ordinary textile processes.

BARKER, HENRY D., AND OTIS A. POPE

Fiber and spinning properties of cotton a correlation study of the effect of variety and environment. Washington, D C. Government Printing Office, 1948 47 p illus. 23 cm. (United States. Department of Agriculture. Technical bulletin no 970) Paper $0.15 2264

Contents: Source of data and statistical procedure. Skein strength in relation to fiber properties: Carded yarns. Combed yarns. Yarn appearance grade for carded and combed yarns. Literature cited. Appendix (tables)

Note Based upon fiber and spinning data accumulated from cooperative studies made by the agricultural experiment stations of the cotton-growing states and the United States Department of Agriculture, this report is concerned chiefly with relating environmental and varietal influences on fiber properties to spinning performance as measured by skein strength and yarn-appearance grade of single, carded, and combed yarns. A related publication based upon similar data is Technical bulletin no. 931 *Fiber and spinning properties of cotton, with special reference to varietal and environmental effects*, by H. D. Barker and E. E. Berkley 1946, 34 pages.

BENDURE ZELMA, AND GLADYS PFEIFFER

America's fabrics origin and history, manufacture, characteristics and uses. Photographic layout by Crystal Stephen fabric photographs by Nat Messik. New York The

Macmillan Company 1946 688 p. illus. (part col'd) 24 cm. $10.00 2265

Contents: America's fabrics. Wool. Cotton. Linen. Minor vegetable fibers. Silk. Rayon. Other synthetics. Asbestos. Yarns. Weaving. Knitting. Twisting. Felting. Chemistry. Pretreatments. Dyeing. Printing. Finishing. Home fabrics. Fabrics defined. Testing and standards. Index.

Note: An encyclopedic survey of the many textile fabrics currently produced in the United States. It is designed to provide information for persons who are not specialists in textile technology such as students, manufacturers who use fabrics, interior decorators, consumers, and persons connected with the selling of textile products. A wide range of information is covered from how the basic fibers are produced to the qualities and uses of the finished fabrics. Fabrics of minor importance are included along with those of major importance. The book is lavishly illustrated with views of textile machinery manufacturing operations, and fabrics.

BERKLEY, EARL ESCO, AND OTHERS

Structure, determined by X-ray and strength of cotton fiber by Earl E. Berkley Orville C. Woodyard, H. D Barker Thomas Kerr and C. J King. Washington, D C. Government Printing Office, 1948 64 p illus. 23 cm. (United States. Department of Agriculture. Technical bulletin no 949) Paper $0.20 2266

Contents: Experimental background of X-ray method. Relation to yarn strength. Influence of growing conditions. Influence of species and varieties. Outline of X-ray method. Literature cited.

Note: In comparing cotton samples for selection in breeding, the X-ray method supplements rather than replaces strength methods. The X-ray technique serves also as a research tool in determining reasons for differences in strength and other properties and in comparing natural and synthetic fibers. This study on the development of the X-ray method shows X-ray measurement to be a valuable tool in cotton-breeding and general fiber-research. The pamphlet is illustrated by tables, graphs, charts, and photographs.

BLACK, MARY E.

Key to weaving, a textbook of hand-weaving techniques and pattern drafts for the beginning weaver Milwaukee The Bruce Publishing Company 1945 312 p illus 26 cm. $6.00 2267

Contents: The loom. Preparing the loom. General information. Two-harness weaves. Three-harness weaves. Four-harness weaves. Five-harness weaves. Six-harness weaves. Eight-harness weaves. Weaving monograms. Rag rugs. Bibliography. Glossary of weaving terms. Weaving terms in foreign languages. Index.

Note: An exceptionally clear and detailed work. It provides full directions for the operation of looms and for the weaving of textiles of varying complexity. It is addressed not only to amateur handicrafters but to persons who wish to do custom weaving on a commercial basis. The author is a teacher with long experience in the teaching of weaving, and the book is designed primarily for use in organized courses. However it can be used in self-instruction. There are over 400 illustrations.

CARMICHAEL W L., AND OTHERS

Callaway textile dictionary by W L. Carmichael, George E. Linton, and Isaac Price. La Grange, Ga. Callaway Mills 1947 392 p. illus. 20 cm. $4 00 2268

Note: Between 5,000 and 6,000 terms are defined in this addition to the sparse collection of textile dictionaries. The average definition is five lines in length, and is generally simple and non-technical. The compilers have confined themselves to the categories of woven fabrics and yarns, including the processes of dyeing and finishing, and the nature and manufacture into finished articles of natural and synthetic fibers. In addition to these definitions, many colors and trade chemicals are included and are defined from a textile point of view. There are approximately 75 illustrations covering textile raw materials, processing machinery and typical weaves.

CRAWFORD BEN H.

Draper loom fixing Reprint of a series of articles published in *Textile Industries* (Atlanta, Ga. W R. C. Smith Publishing Company 1947) 164 p illus. 20 cm. $3.00 2269

Contents (abridged) Weave room jobs. Loom fixer's job. Plain weave. Loom motions (purpose) Loom types and attachments. Fabrics made on plain looms. Plain loom (description). Definitions of defects. Loom drives (individual and group) Picking motion. Parallel motion. Setting pick cams. Shedding motion. Drawing-in warps. Reed mark prevention. Filling cross. The lay. Take-up motion. Let-off motion. Controlling width of cloth. Setting and operation of protector motion. Boxing the shuttle. Bobbin breakouts. Assembling and setting instructions. Maintenance system.

Note: This collection of articles was written for the practical loom fixer and other persons including foremen in charge of the operation and upkeep of weaving machinery. It is intended to serve as a brief guide, rather than as exhaustive treatise on the subject. However it is the most complete treatment currently available. Numerous diagrams and photographs supplement the descriptions of loom operations, adjustments, and settings.

JACKSON, LLOYD HAROLD

Yarn and cloth calculations New York Textile Book Publishers Inc. 1947 198 p illus 21 cm. U.S $6 60 foreign countries, $7 60 2270

Contents. Yarn numbering systems. Converting from one yarn system to another. Ply yarns and resultant counts. Grey cloth calculations. Warp calculations. Filling calculations. Cloth calculations. Theory of fabric construction. Calculations based on fabric analysis. Fabric analysis. Index. Engineering constants for textile engineers.

Note: A practical and valuable tool for anyone connected with the manufacture of textile fabrics or who is studying to enter the industry. It explains the various yarn systems and illustrates the mathematical calculations relating to cloth construction and fabric analyses with numerous worked examples. Review problems are also given at the end of each chapter.

JOHNSON THOMAS HENRY

Tricot fabric design. New York McGraw Hill Book Company Inc. 1946 124 p illus. 21 cm. $2.50 2271

Contents The knitting elements. Warp beams. Formation of the stitch. Function of the pattern wheels. Wales, courses, and revolutions. Laps. Drafting the pattern. Two-bar patterns. Warp stitches. Piqué and corduroy ribs. Meshes and nets. Gutting. Float and tuck patterns. Inlay patterns. Satin-type patterns. Open and closed stitches. Threading behind the needles. Length of pattern repeat. Bead wheels. Intermediate pattern-wheel steps. Unsymmetrical patterns. Three-bar patterns. Colored patterns. Racks and quality. Warp ratios and runners. Graphic designing. Excerpted fabrics. Index.

Note. As the title indicates this book is intended for fabric designers. Accordingly the action of the needles and related parts that form the stitches on knitting machines are described and illustrated, but other parts of the machines are ignored. The detailed instructions for drafting various types of stitches are accompanied by full-page drawings showing the positioning of the thread.

KETTERING JAMES H., AND RITA M. KRAEMER

Commercial cotton-bleaching processes and their effect on fabrics Washington, D C. Government Printing Office, 1947 37 p. illus. 23 cm. (United States. Department of Agriculture. Technical bulletin no 941) Paper $0 10 2272

Contents: Introduction. Literature review Constituents removed. Mill processes. Materials. Methods of evaluating fabrics. Discussion of results. Summary and conclusions. Literature cited.

Note: Because of the importance of bleaching in the purification of cotton, the Southern Regional Research Laboratory of the Department of Agriculture investigated the chemistry of the various bleaching operations as applied commercially in order to improve

the processes and raise the quality of the resultant fabric. The part of the program here reported is the survey of eleven representative modern commercial bleach processes. The report includes comparison of the different methods; the determination of what is accomplished in each step, and of the characteristics or quality of acceptable or marketable fabrics and discussion of some measurable properties of the fabrics, especially those indicating deterioration.

LITTLE, ROBERT WEAVER, editor

Flameproofing textile fabrics Prepared by a staff of specialists under the editorship of Robert W Little. New York Reinhold Publishing Corporation, 1947 410 p illus. 24 cm. (American Chemical Society monograph series) $6 75 2273

Contents Section One, Fundamentals: Flameproofing defined. Degradation of cellulose. Mechanisms of flameproofing. Section Two, Methods: Test methods for evaluation. General flameproofing processes for the treatment of cotton fabrics. Section Three, Applications Introductory Applications to army clothing fabrics. Applications to military equipage. Applications to civilian fabrics. Index.

Note In October 1943 the National Research Council, at the request of the Quartermaster General, contracted with Columbia University for the establishment of a research project (designated as NRC Project Q.M.C. No. 27) on the flameproofing of army clothing The researches of this project, together with investigations made in Quartermaster Corps and other service laboratories, form the basis of the present volume. The presentation is technical and in the style of a monograph. The related literature including patents is cited in numerous footnotes. A glossary is included. The work will be useful to textile chemists and manufacturers and to persons concerned with fire prevention.

MATTHEWS JOSEPH MERRITT

Matthews' Textile fibers their physical, microscopical, and chemical properties prepared by a staff of specialists under the editorship of Herbert R. Mauersberger Fifth edition. New York John Wiley & Sons Inc. 1947 1133 p illus. 24 cm $12 50 2274

Contents: Introduction. Physical properties of fibers. Microscopic and chemical properties of fibers. Cellulose—sources, constitution, and chemical properties. History growth, and statistics of cotton. Microscopical characteristics of cotton fiber The physical properties of cotton. Chemical properties of cotton fiber The bast fibers Structural or hard vegetable fibers Miscellaneous vegetable fibers. Wool—history grades, and statistics Microscopical and physical properties of wool Chemical nature and properties of wool Specialty hair fibers. Textile fur fibers, brush fibers, and down. The silk fibers. Regenerated rayon fibers, filaments, and yarns Acetate rayon fibers and yarns. New synthetic textile fibers, filaments, and yarns Mineral or inorganic fibers and filaments. Fiber identification methods. Quantitative fiber analyses. Fiber-testing methods Index.

Note This edition of a long-established standard work on animal, vegetable, and mineral fibers has been thoroughly revised and rewritten by a board of forty seven experts in the field of fiber technology The greatest amount of additional material consists of 175 pages dealing with rayon and other synthetic fibers. Other important changes include expanded treatments of the physical and chemical properties of fibers as a whole additional material on cellulose, and on fiber identification Lists of references to the related literature accompany all chapters These lists, although extensive are uneven in quality Altogether because of its authenticity and comprehensiveness, the work is a valuable manual and reference guide.

ROSE, HAROLD WICKLIFFE

The rayon and synthetic fiber industry of Japan supplementary material gathered for the United States Department of State and War Department Textile Mission to Japan, January March 1946 New York Textile Research Institute Inc. 1946 340 p illus. 24 cm. $6.00 2275

Contents (abridged) Rayon companies and plants—in Japan—in Manchuria and Korea. Rayon production. Spindles for rayon staple. Blends of fibers. Government controls and associations (of rayon industry and trade) Raw materials. Rayon machinery Japanese rayon—nomenclature—processes—types. Synthetic fibers and materials. Research and education. Patents. Details of rayon companies and plants. Appendices: Sources, bibliography references. Factors. Glossary Index.

Note During the period January to April, 1946 a mission, sponsored by the U S. State Department and the U S. Army made a survey of the Japanese textile industry with a view to ascertaining both current and future production capacities. This volume is based on that part of the mission's report dealing with rayon, of which material Japan was at one time the world's largest producer. The volume contains numerous photographs of rayon plants and equipment and of leading men in the Japanese rayon industry A brief bibliography and a glossary of Japanese technical terms are included.

SHERMAN, JOSEPH V , AND SIGNE LIDFELDT SHERMAN

The new fibers. New York D Van Nostrand Company Inc., 1946 537 p. illus. 22 cm $5 00 2276

Contents Introduction. Comparison of fibers. Nylon. Vinyl resin fibers. Vinylidene chloride fibers. Glass fibers. Polyethylene fibers. Other synthetic fibers. Casein fiber Soybean protein fiber Other protein fibers. Improved rayons. Rayon staple fiber Economic aspects of rayon. New cellulosic fibers. Miscellaneous new fibers. Chemical treatments of textiles. Applications and trade names. Research and the future of fibers. Appendix—Patents section. Index.

Note Much of the material in this book relates to fibers of proven commercial importance but minor developments, such as cattail fiber milkweed and metal filaments, are also described. Summarized but fairly comprehensive information is given on the history manufacturing methods, properties, uses, quantities produced, and prices for each important fiber The classified list of basic patents covering fiber developments in the United States during the past ten years is particularly useful. The work is of interest to persons in the textile industry to manufacturers in other lines that use fibers and fabrics, and to general readers as a convenient reference book.

TEPLITZ IRVING

Principles of textile converting New York Textile Book Publishers Inc., 1947 180 p. illus. 21 cm. U.S., $4 40 foreign countries, $5 40 2277

Contents Organization of the textile industry Vertical organization in textiles Fibers and yarns. Construction of a fabric. Types of fabric. Converting procedure. Converting problems. Textile merchandising Future of real silk in America. Textile industry in the future. Appendix. Index.

Note A brief easy-to-read book that outlines the organization of the textile industry and describes the function of the converter. It contains also short, semi-technical descriptions of the chief textile fibers, yarns, and fabrics and an outline of such converting operations as dyeing, shrink-proofing, slip proofing, and coating The appendix contains a variety of useful information such as converting charges yarn and cloth prices yardage tables, and data on the physical characteristics of fibers.

VON BERGEN WERNER, AND HERBERT R. MAUERSBERGER

American wool handbook a practical text and reference book for the entire wool industry Second enlarged edition New York Textile Book Publishers Inc. 1948 1055 p illus. 19 cm. U.S., $8.80 foreign countries, $9.80. 2278

Contents: Foreword, by Arthur Besse. Historical and economic background Sheep breeds—sheep raising. Physical properties of wool. Chemical nature and properties of wool. Specialty hair fibers. Reclaimed wools and secondary raw materials. Grading and production of wool. The marketing of wool. Sorting, scouring and carbonizing Blending and woolen carding. Spinning woolen yarns. Worsted carding, combing, topmaking. English and French worsted drawing Worsted yarn spinning. Processes preparatory to weaving Weaving of woolens and worsteds. Woolen and worsted weaves. Dyeing, bleach-

ing and printing. Wet finishing operations. Dry finishing operations. Manufacture of carpets and rugs. The manufacture of felts. Physical and chemical testing. Bibliography. Subject index.

Note. The wide scope of the first edition (1934) of this book has been retained, but most chapters now include descriptions of new processes and machinery and recent data on the economics of wool production. The chemical and physical properties of wool and the latest methods developed to prevent shrinkage are presented in two chapters instead of one. Other additions include a description of continuous solvent degreasing and wool grease recovery processes, twist tables for woolen and worsted yarns, an explanation of the American system of spinning, matching of colors, and new mothproofing methods. The bibliography has been expanded from eleven to twenty-two pages. The work, designed primarily for use in the raw wool and textile industries, is useful also for reference in libraries.

WEINDLING LUDWIG

Long vegetable fibers manila, sisal, jute, flax and related fibers of commerce. New York Columbia University Press, 1947 311 p illus. 24 cm. $5 00 2279

Contents: The uses and development of vegetable fibers. Characteristics of vegetable fibers. Economic aspects of the industry. Manila hemp cultivation. Manila hemp commercial practices. Sisal cultivation. Sisal commercial practices. Istle, New Zealand, and Mauritius fibers. Cordage and other hard-fiber manufactures. The cordage industry in the United States and Canada. Jute cultivation. Jute manufacturing. Jute industry. Flax cultivation. Linen manufacturing and the linen industry. Hemp. Sunn hemp and ramie. Index.

Note: In this book, overall pictures are given of the industries based on the fibers that are mentioned in the chapter titles. Cultivation of the plant from which the fiber is produced; preliminary treatment of the fiber; its marketing, the technology of spinning, weaving and related processes, etc.; economic aspects such as the number of persons employed in the world industry and prices over a period of years are among the topics covered. However, the economic aspects are emphasized. There are a few footnote references to pertinent literature but, unfortunately, no bibliography of account. The illustrations are relatively few.

INDUSTRIAL MANAGEMENT

GENERAL

BAETJER ANNA MEDORA

Women in industry their health and efficiency issued under the auspices of the Division of Medical Sciences and the Division of Engineering and Industrial Research of the National Research Council. Prepared in the Army Industrial Hygiene Laboratory Philadelphia W B Saunders Company 1946 344 p illus. 24 cm. $5 00 2280

Contents (abridged) Section I: The physique of women in relation to work, fatigue and physical stress. Types and arrangement of work for women. Personnel and plant policies in the employment of women. Section II: Sick-absenteeism of women in industry comparison with men. Factors affecting the sick-absenteeism of women. The excess sick-absenteeism of women. Its causes and prevention. Section III, Accidental injuries to working women. Occupational injuries to women: conditions affecting them and their prevention. Nonindustrial injuries to women employees. Section IV: Occupational diseases among women employees. Section V: The relation of industrial work to pregnancy. Recommendations for the employment of pregnant women. The relation of industrial work to menstruation, the menopause and other gynecological conditions. Section VI, Mortality and fertility of women in relation to occupation. Section VII Summary. Appendices. Bibliography. Index.

Note. This report is based on a study of available literature and on an analysis of statistical information obtained during World War II. It reviews and summarizes pertinent data concerning the health and efficiency of women workers, not as a justification of the employment of women, but to assist in the proper placement of women in industry during the post-war years. The references given at the end of each chapter and the concluding bibliography provide an excellent review of the literature of the subject.

BAKER HELEN

Management procedures in the determination of industrial relations policies. Princeton, N J Industrial Relations Section Department of Economics and Social Institutions, Princeton University 1948 81 p 23 cm (Research report series. No 76) Paper $2.00 2281

Contents (abridged) Introduction. Responsibility for decisions on major personnel policies. The initiation and formulation of policies. Outstanding problems. Summary and conclusions.

Note. An analysis of the procedures in determining personnel policies followed in eighty-four companies in the United States of America, which operate mainly on a multi-plant basis and employ from 250 to 150,000 workers each. A summarized, factual account of these procedures is given, and the trend toward wider participation of high executives and of the chief personnel officer in formulating these policies which had been observed since 1938 is discussed. In addition to making available hitherto unobtainable information on current practices, the booklet offers suggestions for further study of several aspects of the problem.

BAKER HELEN AND JOHN M TRUE

The operation of job evaluation plans, a survey of experience. Princeton N J Industrial Relations Section Department of Economics and Social Institutions, Princeton University, 1947 111 p illus 23 cm. (Industrial Relations Section research report series. No 74) Paper, $1.50 2282

Contents (abridged) General experience with job evaluation plans: Relative satisfaction and dissatisfaction. Age of plans in relation to present status. Experience with different types of plans. Principal reasons for failure. Advantages of job evaluation. Conditions of installation affecting operation. The company's purpose in adopting plans. The use of company staff or outside consultants. Extent of participation of management and employees. Extent of training in job evaluation of supervisors, employees, and union representatives. Conditions outside the company. Administrative arrangements: General coordination of wage and salary programs. Responsibility for specific aspects of administration. Continuing intra-company administrative problems: Problems common to wage and salary administration. Differences in problems of wage administration and salary administration. External conditions affecting operation: Adjustments to labor market conditions. Conflicts with job content as the criterion of value. Conflicts with prevailing rates. Union attitudes affecting operation. Conclusions. Factors in the successful operation of job evaluation programs. Fundamental difficulties of administration. The continued usefulness of job evaluation. Appendix: Case studies of three plans. Selected references.

Note. Primarily this work is a summary of the experience of a varied group of American firms with the establishment and operation of job evaluation systems. Reports of experience were obtained from seventy-three companies, and the union side of the picture was obtained by discussions with officers of twenty labor unions. However neither the firms or the unions, or their officers, are identified; nor is the information that was obtained tabulated. Instead, the experience is condensed and analyzed in a form that can be quickly used by corporation and union officers who are charged with the difficult responsibility of establishing plans which will be satisfactory to both employers and employees.

BARNES RALPH MOSSER, AND NORMA A. ENGLERT

Bibliography of industrial engineering and management literature to January 1, 1946. Fifth edition. Dubuque, Iowa Wm. C. Brown Co., 1946 136 p 28 cm. Paper $3.00. 2283

Contents (abridged) Books and bulletins. Articles and papers. Abbreviations of titles of magazines and papers used in bibliography. Classification of articles and papers by subjects.

Note. The present edition of this standard bibliography contains 4462 entries. The scope is not exhaustive, but the compilers have apparently attempted to list all of the important books and articles published in the English language and some of the material published in other languages, especially in French and German. The entries are not annotated. "The classification of articles and papers by subject" is in effect a detailed subject index to the individual entries.

BEAUMONT, HENRY

The psychology of personnel. New York Longmans Green and Co, 1945 306 p. 21 cm. $3.00 2284

Contents Understanding employees. Analyzing jobs. Selecting employees. Training employees. Working conditions. The workers' health. Promoting safety. Supervision. Merit rating. [illegible]

cantive. Occupational adjustment. Index of organizations cited. Index of subjects.

Note: Here is summarized current professional opinion on personnel problems in industry with special attention given to postwar adjustments. Presentation is direct, and academic phraseology is avoided. The many problems of employer-employee relations are reviewed, with emphasis on the mutual advantages to be gained by labor and management has scientifically integrated personnel policy is pursued, although there is little treatment of how these might be achieved when optimum policies are impracticable. The text should be helpful to untrained personnel directors as well as beginning college students in the field. The author is Professor of Psychology and Director of the Bureau of Industrial Psychology at the University of Kentucky. Written for use with this book is the author's *Psychology applied to personnel*, New York: Longmans, Green and Co., 1944, 187 p., $1.75. The latter title contains presentation of useful statistical methods and also notes, literature references, forms, etc.

BENSON BARBARA ELNA
Music and sound systems in industry New York McGraw Hill Book Company Inc., 1945 124 p illus. 23 cm. (McGraw Hill industrial organization and management series, L. C. Morrow consulting editor) $2 75 2285

Contents: The organization of an industrial broadcasting system. Programming music for industry. Broadcasting for industry. Scientific research on music in industry. The evolution of industrial broadcasting and conclusions. Bibliography. Discography. Index.

Note: A summarized account of various methods and systems of industrial broadcasting which have been put into practice in the United States during the past ten or fifteen years. The volume deals almost entirely with organization and management of music broadcast programs in factories, and no attempt is made to discuss the psychological aspects of the subject. The eight-page bibliography and the extensive list of commercial records available for industrial use are useful features.

BETHEL LAWRENCE L. AND OTHERS
Industrial organization and management. New York McGraw Hill Book Company, Inc. 1945 798 p illus. 24 cm. (McGraw Hill industrial organization and management series L. C Morrow consulting editor) $5.00 2286

Contents (abridged): Section One, American industry: Fundamental concepts. Basic industrial structures. Section Two Organization of the industrial enterprise. Industrial risk and forecasting. Building the internal organization. Developing the product—research and engineering—simplification, diversification, and standardization. Section Three, Operation of the industrial enterprise A. Manufacturing the product. Planning for production. Controlling materials. Controlling production. Quality control. Methods analysis and work simplification. B. Administration of industrial relations. Principles of industrial relations. Personnel management. Employee training. Joint relations or collective bargaining. Job evaluation. Wage and salary administration. C. Selling the product. D. Managing the general offices. Section Four Coordination of the industrial enterprise. Bibliography. Index.

Note: Designed primarily as an introductory text for students of industrial management, this volume will also be of use as a guide for lawyers, accountants, and others, whose dealings with industry require knowledge of the fundamentals of organization and management. The treatment is comprehensive and systematic and each chapter provides statements of principles followed by examples of their application; discussions of controversial questions and, finally problems to be worked out by the reader. A number of charts illustrate the various methods used in applying the basic principles in practice. The eleven-page bibliography is arranged according to subject.

BETHEL, LAWRENCE L AND OTHERS
Production control, by Lawrence L. Bethel, Walter L. Tann Franklin S Atwater and Edward E. Rung Second edition. New York McGraw Hill Book Company Inc. 1948 289 p. illus. 24 cm. $3.50 2287

Contents: The concept of control. Organization for control. Production forecasting. Product development. Production analysis. Relating budgeting to production. Routing of operations and processes. Scheduling production. Dispatching. Follow-up—expediting. Control of materials. Classification and identification. Quality control. Relating cost to production. Coordination. Appendices. Bibliography. Index.

Note: An introductory text. The first edition was designed for use in classes offered to newcomers in the field during the great increase in factory staffs in the United States during World War II. In this edition the book has been revised to adapt it to the needs of men preparing for peace-time industry. A broad but practical view of the subject is given. The various basic operations in the planning and control of production of manufactured goods in American factories are explained clearly; but as is appropriate in a brief introductory work are not covered in great detail. Many useful forms for production records are shown in the appendices. The bibliography although limited to books, runs to four pages and lists further reading on all the major branches of the topic.

BROADED CHARLEY HOOKER
Essentials of management for supervisors. New York Harper & Brothers, 1947 239 p illus. 22 cm. $3.00 2288

Contents (abridged): The planning function. The organizing function. The command function. The control function. The co-ordinating function. Building confidence. Developing initiative. Correcting mistakes (reprimanding). Adjusting people to new situations. Getting co-operation. Work simplification. The supervisor instructs. Summary of the four phases of supervision. Evaluation of supervisory practices. Related references. Index.

Note. An introductory guide to the techniques of successful supervision of personnel in business enterprises. Its brief and concise text is popularly written and arranged in fashion to make it not only easy to understand but also easy to remember. To this end, the *key points are recapitulated at the end of each section* dealing with one of the main phases of supervisory activity. The analysis of the various functions and requirements of supervision is preceded by brief explanation of the basic principles of free enterprise economy and business operation. A series of check charts and short list of selected bibliographical references are appended.

CANTOR, NATHANIEL
Employee counseling a new viewpoint in industrial psychology New York McGraw Hill Book Company Inc., 1945 167 p illus. 24 cm. (McGraw Hill industrial organization and management series, L. C. Morrow consulting editor) $2.50 2289

Contents: Part One, The problem: The problem. The development of counseling programs. The growth pains of counseling program. Part Two, The approach. The psychology of adjustment. The function of the employee counselor. The function of the consultant in operation. Knowledge and skill in counseling. Part Three, The organization. The employee consultant staff. The counseling program in the organization. Selected bibliography. Index.

Note. In this practical study of employee counseling in industry the author describes and evaluates the existing status of this field and suggests ways and means of improving its usefulness. The growth and difficulties of employee counseling in America, the basic psychological theories of human behavior and the organization and place of counseling staff in any industrial plant are all dealt with in turn. Frequent case histories scattered throughout the text demonstrate typical interviewing procedures. Dr. Cantor is chairman of the Department of Sociology and Anthropology at the University of Buffalo.

CLEETON GLEN URIEL, AND CHARLES W MASON
Executive ability its discovery and development. Yellow Springs, Ohio Antioch Press, 1946 540 p. 22 cm. $4.50 2289a

Contents (abridged): The executive problem. Executive functions. Executive qualities. Measurement of executive traits. Prediction of executive success. Development of executive ability. Hints to prospective executives. Executive attitudes and emotional nature. Executive control of personnel. Modern executive techniques. The executive in democracy. Appendix: Bibliography. Norms for executive check list for self-evaluation. Norms for in-

terest test. Norms for executive attitude questionnaire. Indexes Index of names. Index of organizations. Subject index.

Note A fully-developed study of the characteristics, functions, and duties of executives in present-day democratic society A considerable part of it is based upon the principles of psychology and there are full descriptions of such psychological topics as tests for discovering and measuring executive ability The responsibilities of executives to modern society are discussed at length. The book was first published in 1934, but the present edition has been so thoroughly revised and enlarged that it is essentially new work. It is suitable for use as text in college courses and also as professional reading for both young and mature executives out of school.

COOPER, ALFRED M

How to supervise people. Second edition New York McGraw Hill Book Company Inc. 1946 162 p 20 cm. $2 00 2290

Contents How to become supervisor The responsibilities that come with authority The physical condition of your subordinates. How to develop group morale. The qualities of leadership. This thing called cooperation. Hiring, reprimanding, and firing. When and how to delegate authority The supervisor as teacher Improving public relations Questions for group discussion. Index.

Notes (1220) A reference book designed primarily for supervisors in factories, public utility corporations, stores, offices, and public administration. It may also be used as beginner's text in the field of administration. The subject matter of this edition has been brought up to date and new chapter added on the supervisor' responsibility for improving the company's public relations.

CORNELL, WILLIAM BOUCK

Organization and management in industry and business. Third edition. New York The Ronald Press Company 1947 819 p illus 24 cm. $5 00 2291

Contents (abridged) Part I, Organization and operation of business enterprise Principles of organization. Principles of management. Analysis of the industrial problem The company organization. Comptroller's department. Engineering department. Purchasing department. Material control—storekeeping. Manufacturing department. Inspection division. Power and maintenance division. Sales department. Management of personnel relations. Part II, Production control and time study Tool control Production control. Routing. Scheduling. Time study Part III, Illustrations from practice An illustration of the layout and arrangement of textile mill. A practical illustration of dispatching (Chrysler Corporation) Bibliography Index.

Note: A college textbook which provides broad introduction to the problems and methods of practical management of industrial enterprises. Methods followed by outstanding corporations in the United States of America are emphasized. The author is Chairman of the Department of Management and Industrial Relations of the School of Commerce of New York University

CUSHMAN FRANK, AND ROBERT W CUSHMAN

Improving supervision a discussion of human relations problems for supervisors in industrial and business organizations. New York John Wiley & Sons Inc., 1947 232 p 19 cm. $2 50. 2292

Contents: Industry' seasonal cycle. Line and staff supervision. The supervisor' place in management The supervisor's job The development of supervisors Analyzing the supervisory job Supervisory job planning Waste control. Cooperation. Knowing your men. Verbal orders. Written orders and information. The place and function of training. Matching men and jobs. Job training. Job interest Job satisfaction. Carelessness. Safety and accident prevention. Discipline. Loafing Absenteeism and tardiness. Working conditions. Grievances. Rating employees. Index.

Note Although applicable in general to commercial and business organizations, this manual is directed primarily to supervisors (foremen) in industrial plants Simple in phraseology and abounding in concrete illustration, it should be most helpful as an introductory study to foremen he lack previous training in the problems of personnel and management. The body of the text is discussion of the multiple aspects of the industrial supervisor's job and includes practical suggestions for the efficient handling of these responsibilities. Considerable attention is paid to demarcation of the supervisor's sphere with relation to management above and workmen beneath, with stress laid on the necessity for close observance of jurisdictional lines.

FERN, GEORGE HENRY

Training for supervision in industry New York McGraw Hill Book Company Inc., 1945 188 p illus. 24 cm. (McGraw Hill industrial organization and management series, L. C Morrow consulting editor) $2.50 2293

Contents The supervisor and his job. The importance of mental health to industry Safety and accident prevention. Women in industry Starting new worker right. Supervisors and job relations. How to analyze jobs. How to lead conference. Training conference discussion topics and analyses. The supervisor as an instructor Training opportunities available today Bibliography Index.

Note. A handbook for supervisors based on the analysis of actual problems discussed at supervisor conferences in industrial enterprises. Stressing the need for constant self-improvement on the part of supervisory personnel, the author explains the requirements of good supervisor in terms of problems submitted as topics for conference discussions and their solutions. Breakdown examples illustrate the method. The text includes directions for conducting such conferences and for training workers on the job, as well as list of available training opportunities. By avoiding generalities and drawing upon factual material, the author has achieved a useful combination of practical and systematic approach, without letting the contents become trite or superficial.

FRANK BERTRAND

The progressive sewing room. New York Fairchild Publications, Inc., 1948 240 p. illus. 22 cm $5.50 2294

Contents: Part I, Introduction Historical background. Handling. Part II, Basic information Systems of manufacture. Process analyses. Motion economy Time study Wages. Part III, Area considerations. Plant location. Physical facilities. Part IV Factory analysis and installation of improvements Manufacturing method. Plant layout. Part Development Training and retraining. Supervision. Control. Conclusion. Bibliography of selected reading. Glossary

Note. A practical discussion of the application of industrial management methods to the garment manufacturing industry The author states that the greatest cause of high costs is in the handling of materials; and he analyses commonly-used manufacturing systems, showing weaknesses and sources of waste. There are detailed instructions for time and motion study and for making job evaluation. An equitable wage structure is defined, and recommended as means of maintaining harmony in the shop. A valuable section of the book deals with plant location and layout.

GHISELLI, EDWIN ERNEST, AND CLARENCE W BROWN

Personnel and industrial psychology New York McGraw Hill Book Company Inc., 1948 475 p illus. 24 cm. (McGraw Hill publications in psychology J F Dashiell, consulting editor) $4.50 2295

Contents The scientific study of human factors in industrial problems. Job and worker analyses. Criteria of proficiency on the job. Rating methods. The interview and personal-data analysis. Use and characteristics of psychological tests. The evaluation of tests. Examples of employment tests in use. Definition and meaning of effective work. Conditions of work and productivity Effective methods of work and design of equipment. Psychological principles applied to problems of industrial training. Principles and methods of industrial training. Accidents and the safety problem. Monetary Worker motivation and morale. Author index Subject index.

Note A comprehensive treatment of the psychological principles fundamental to effective industrial personnel and training policies. The book is designed for university students and interested readers in industry business, and labor Because of its many brief subdivisions and its simple language, it is easy to comprehend. Its general approach is characterized by the emphasis on the human factor as an integrated whole, in contrast with the prevalent atomistic conception of the worker as sum of mechanical responses to stimuli, hence the authors' criticism of certain commonly applied tests and of the consequent errors in evaluation. A number of examples in the text and the references compiled at the end of each

chapter contributes to a thorough and systematic presentation, while not interfering with the readability of the book.

HALSEY, GEORGE D

Handbook of personnel management. New York Harper & Brothers 1947 402 p illus. 24 cm. $5 00 2296

Contents (abridged) Objectives and guiding principles of sound personnel management. Job analysis. Recruiting employees. The use of tests as an aid in selecting employees. Increasing the effectiveness of the employment interview. The employment of physically handicapped persons. Induction of new employees and information booklets. Training employees—objectives, methods, and principles. Employee merit rating. Correction and discipline. Job evaluation and salary ranges. Wage-incentive and profit-sharing plans. Employment stabilization and the guaranteed annual wage. Special considerations in the employment and supervision of women. Getting the employees' suggestions. Employee grievances. Health, recreation, and general welfare. Group insurance and retirement. Collective bargaining from two viewpoints. The foreman and the union. Labor relations in nonunionized plants. Personnel records and statistics. Personnel management in the public service. Appendix: Sources of information and help in personnel management. Index.

Note: A thorough presentation that is designed primarily for executives in charge of personnel management and only secondarily for the use of college students of the subject. The material is based on the author's nearly thirty years of experience in the field and is exceptionally practical. Numerous actual examples of cases and techniques from the personnel experience of American industrial corporations are described. Examples of forms are reproduced. The directory of information sources covers organizations rather than literature.

HOSLETT SCHUYLER DEAN editor

Human factors in management. New York Harper & Brothers 1947 322 p 22 cm. $3.50 2297

Contents: Part I, The executive and the organization—The nature and conditions of leadership. The development of leadership power, by Ordway Tead. The nature of leadership, by Chester I. Barnard. The conditions of effective leadership, by D. McGregor. The foreman—master and victim of double talk, by F J Roethlisberger. Training leaders in human relations; Manager meets union—a case study of personal incompatibility, by J M. Gottlieb and L. Low. A method of training foremen, by J R P French, Jr. Humanizing relations of key persons, by H. Meltzer. Part II, The worker and the organization—Studies in human relations: Management mentalities and worker reactions, by R. N McMurry. The Western Electric research, by G. C. Homans. Motives for union membership, by C. S. Golden and H. J Ruttenberg. Facilitating adjustments through the counseling method. Content and organization of the counseling service, by Office of Community War Services. Employee counseling in a federal agency, by M. E. Baron. The Hawthorne plan of personnel counseling, by W J Dickson. Counseling for supervisors, by Schuyler Hoslett. Part III, Critiques: The psychology of participation, by G. W Allport. Anthropological engineering—its use to administrators, by E. D Chapple. Industry and the community, by C. M. Arensberg. Psychological studies of employee morale, by A Kornhauser.

Note. The papers collected in this volume represent some of the more significant writing that has appeared in recent years in American books and periodicals on the relatively intangible factors that affect workers' productivity and their attitudes toward their employers.

JOHNSON FORREST HAYDEN AND OTHERS

Job evaluation by Forrest Hayden Johnson Robert W Boise, Jr and Dudley Pratt Illustrated by J Gurney Miller New York John Wiley & Sons Inc. 1946 288 p. illus. 22 cm. $3 75 2298

Contents (abridged) Building a job-evaluation plan. Typical factory job-evaluation plan. Typical clerical and technical job-evaluation plan. The job-evaluation manuals. Relating job evaluation to pay scales. Assigning employees to evaluated jobs. The system in operation. Appeal procedure. Recognition of individual merit. Bibliography. Index.

Note: A job-evaluation system that combines features of the ranking, factor-comparison and point systems is presented. The plan reflects the authors' experience in several companies, including Boeing Aircraft. It is based on analyses of the jobs by the job-evaluation department and a committee on which the workers are represented. Jobs are analyzed for such factors as mental ability, experience and training required, complexity of duties, responsibilities, physical effort, working conditions, and unusual hazards; point values are assigned to these factors. Analysis procedures are discussed in detail.

KIMBALL, DEXTER SIMPSON, AND DEXTER S KIMBALL JR.

Principles of industrial organization. Sixth edition. New York McGraw Hill Book Company Inc., 1947 531 p illus. 23 cm. (McGraw-Hill industrial organization and management series, L C Morrow consulting editor) $4.50 2299

Contents: The background of industry. The industrial revolution. The economic and social effects of inventions. The growth of industrial enterprises. Other industrial tendencies. Formation and maintenance of policies. Industrial ownership. Location, arrangement, and construction of industrial plants. Principles of organization. Coordination and executive control, system. Classification and identification. The control of production. Operation standardization—time and motion studies. Purchasing. Stores and stock. Standards and standardization. Attainment of standards—inspection. Principles of cost finding. The depreciation of wasting assets. Equipment policies. The compensation of labor. Job evaluation and merit rating. Measures of management. The mechanization of industry. Industrial relations. Industrial democracy. Résumé—science in industry. Index.

Note: (4478) This work has become widely known and used as a good introductory survey of the basic principles and practice of industrial organization and management with considerable emphasis upon the social functions and obligations of industry. Its chief use is as a college textbook, but it is useful also as a source of information for mature readers. Numerous minor revisions have been made in this edition and in various parts, e.g. the discussion of labor unions, complete sub-sections have been rewritten. The chapter on job evaluation and merit rating is new and the reference lists have been revised.

LINCOLN JAMES FINNEY

Lincoln's incentive system, covering the basic principles of the incentive system in manufacturing. New York McGraw-Hill Book Company, Inc., 1946 192 p illus 23 cm. (McGraw Hill industrial organization and management series L. C Morrow consulting editor) $2 75 2300

Contents. Results of incentive management. How to develop the worker. Why new leadership is necessary. How should income be divided? Government and incentive. Collective bargaining is civil war. The advisory board. How jobs are made. How to install piecework. How to install the incentive system in a going concern. Starting a business under the incentive system. Economics of incentive management.

Note: The author, president of the Lincoln Electric Company, describes incentive management as a philosophy of work rather than simply as a scheme for speeding up production. Describing the plan that has been successful at the Lincoln Electric Company he shows its beneficial effects upon the output and costs of the company's product, as well as its benefits to the workers, which now include not only high earnings but annual bonuses, vacations with pay, group insurance and annuities for retired workers. Chiefly, however, the book is a discussion of a philosophy of labor-management relations with some stress on the relationship between business and government.

LYTLE CHARLES WALTER

Job evaluation methods New York The Ronald Press Company 1946 329 p. illus. 24 cm. $6 00 2301

Contents: A minor function becomes a major one. Determining policies and organizing. Methods and techniques. Choosing job characteristics. Selling the plan. Setting up measuring scales. Job analysis—describing and specifying. Job analysis—classifying. Locality surveys—setting the general wage level. Building the rate structure. Operating and adjusting. Merit rating. Applying evaluation to office

and supervisory positions. Appendix Equal pay for equal work. Government regulations on wages and salaries Index.

Note Rather than a study of individual job evaluation methods, this work is a general, analytical approach to the whole problem. The author who is Professor of Industrial Engineering at New York University discusses principles and techniques, cites case histories and literature pertaining to successful job evaluation systems, and offers successful solutions for particular problems. Plant managers, factory supervisors, and students in colleges of commerce or engineering will find in the book the necessary preparation for devising job evaluation systems of their own.

MAHLER, WALTER ROBERT

Twenty years of merit rating 1926–1946 selected annotated and classified references from industry business government, and education experience and research. New York. The Psychological Corporation 1947 73 p. 23 cm Paper $1 75 2302

Contents: General discussion. Administration of merit rating programs. Specific types of merit rating. Report of merit rating research. Report of merit rating experience. Author index.

Note. An annotated bibliography of books and periodical articles on employee evaluation methods The lists include selected publications that appeared during the interval 1926–1946 plus a few of the more important works printed prior to 1926.

MAIER, NORMAN RAYMOND FREDERICK

Psychology in industry a psychological approach to industrial problems. New York Houghton Mifflin Company 1946 463 p illus. 21 cm. $3.25 2303

Contents: Introduction. Causation in behavior The psychology of attitudes. Frustration as a factor in forming attitudes and developing social movements. Morale. Individual differences. Measuring proficiency The use of psychological tests in industry The general nature of psychological tests. Motion and time analysis. The acquisition of skill. Basic principles in motivation Motivation and work. Fatigue Psychological fatigue and related phenomena. Accidents and their prevention. The working environment. Psychological factors in labor turnover Conclusions. Bibliography Index.

Note An introduction to the theories and principles of psychology as applied to human problems in industry The book is eminently practical and is written primarily for the industrial leader or administrator who is concerned with present-day problems of employer-employee relationships, but who may not have had previous training in psychology Technical detail has been reduced to minimum and emphasis is placed on problems of morale, attitude, and motivation, rather than on employee selection and methods of testing. A twenty-two page bibliography is included.

MOORE, WILBERT ELLIS

Industrial relations and the social order New York The Macmillan Company 1946 555 p illus. 22 cm. $4 75 2304

Contents: Part I, Introduction The field of industrial relations. Part II, Development of modern industry: The factory system and its forerunners. Capitalism, science and technology Individualism and the division of labor Part III, Industrial organization—management The growth of professional management. "Blueprint" organization. Managerial functions—executives. Managerial functions—specialists and supervisors. Human relationships and technical efficiency Part IV Industrial organization—labor The sources of labor supply Wastes of labor resources. The worker and the machine. Informal organization of workers The question of motives. Part V, Industrial relations Labor organization. Collective bargaining Industrial conflict. Part VI, Industry and society The industrial community Social classes and the industrial order Social controls of industry Prospects and problems of economic planning Index of authors cited Subject index.

Note Prepared as an introductory text for college students in labor relations, the work expounds in logical sequence and with a minimum of academic jargon the bases for understanding the complex role of labor in contemporary American society The usefulness of the book need not stop in the classroom but could be extended profitably to laymen who are concerned directly or indirectly with current labor policies and practices. A successful balance has been maintained in keeping the approach simple enough for beginning students, yet sufficiently provocative for those more at home in the subject. There are bibliographical footnotes and generous lists of references following each chapter.

PIGORS, PAUL JOHN WILLIAM, AND CHARLES ANDREW MYERS

Personnel administration a point of view and a method. New York McGraw Hill Book Company Inc., 1947 553 p illus. 24 cm. $4.50 2305

Contents (abridged) Part I: The nature of personnel administration. Handling personnel problems. Diagnosing organizational stability Wages and hours. Employee services and programs. Part II, Case illustrations A need for policy thinking. Planning for interviews. The effect on work teams of labor turnover and internal mobility Need for effective employment policies and procedures. The old-line foreman. Factors in promotion policy Difficulties in rating employees. Problems in downgrading. Discharge for "insubordination." Difficulties with an incentive system. Recommended policy on technological changes. Safety in a punch-press department. The scrap campaign. Appendices The Western Electric research program. The job relations training program of the TWI. Summary of an employee-service program. References. Index.

Note The aims, problems, and methods of personnel management in unionized industrial establishments are explored in this work. Although the authors aimed at a broad, rather than exhaustive, treatise they have gone into considerable detail in their discussions of typical situations that arise in the carrying out of personnel programs. Part II, which accounts for about one-third of the book, consists almost entirely of case histories which are discussed by the authors and are supplemented by questions for classroom discussion. In both parts of the book sound principles, based upon viewing workers as human beings, are emphasized. The book is suitable for use in college classes and also as a self-instruction course for persons entering or already engaged in personnel work. Both authors are members of the faculty of Massachusetts Institute of Technology

PLANTY, EARL GERALD, AND OTHERS

Training employees and managers for production and teamwork, by Earl G Planty William S McCord, and Carlos A. Efferson. With a foreword by Robert W Johnson. New York Ronald Press Company 1948 278 p. 24 cm. $5 00 2305a

Contents (abridged) Part I, Training—what it is and what it does. Part II, Organizing, installing, and administering training program Position of training in company organization. Who should teach? Qualifications of the training director What to teach. Mechanics of the training program. Part III, Teaching and the training program. Teaching aids. Selecting and improving the training staff. Aims and objectives of presupervisor supervisor, and executive training. Technical and professional training. Trade and semiskill training. Office and business training. Special training problems of the small company The integrated program. Selected references. Index.

Note The thesis of this volume is that a well-planned program of in-service training is an effective means of improving plant efficiency employee morale, and labor-management relations in industrial firms Based on the authors' experience in establishing and conducting industrial training programs, it describes and analyzes techniques and programs which have proved successful. The very practical discussions of what training can and cannot accomplish, and the descriptions of methods of organization, administration, and actual training programs are useful to training directors, executives, personnel managers, and others concerned with training work in industry

PROBST JOHN BERNARD

Measuring and rating employee value. New York The Ronald Press Company 1947 166 p illus. 24 cm. $5 00 2306

Contents (abridged) Part I, Employee rating plans in general: Ratings and their purpose. Types of rating plans. A critical analysis of rating plans. Part II, An improved rating system The Probst system in operation. Testing a rating system. Statistical analysis of ratings. Part III, The system in practice Special experimental tests of rating methods Filling supervisory and key positions. Measuring [illegible] of the [illegible] personal fitness. Appendices Origin and development of the

stencils and formula scales in the Probst rating system. Form selection. Los Angeles statistical chart and data. The order of lay-off. Oral interviews—analysis of a six-year study. An experimental test in England with the Probst rating system. Directions for conducting an experimental test in measuring the worth of employees. Index.

Note: The greater part of this book is concerned with the rating system developed by the author and known by his name. The system is described and illustrations are given of the forms that are used. The procedures of making the ratings, checking, and interpreting them are discussed. A number of examples of actual results of using the system in various types of organizations, including governmental, are incorporated in the discussion.

RYAN THOMAS ARTHUR

Work and effort, the psychology of production New York The Ronald Press Company 1947 323 p illus. 24 cm. $4.50 2307

Contents: Introduction. The meaning of efficiency or economy of work. Measuring the cost of work: I, Metabolism and muscular fatigue. II, Fatigue in sedentary work. III, Physiological tests of effort and fatigue in sedentary work statistical indices of efficiency. Specific factors governing efficiency and productivity. Work methods and efficiency. Incentives and motives. "Nervous" fatigue and boredom. Time standards and rate setting. Merit rating and job evaluation. Psychological problems in accident control. Skill and practice. Index of names. Index of subjects.

Note: In this work numerous investigations that have been made to discover the psychological factors in the productivity of industrial workers are described and the conclusions drawn from them are stated. The research methods used in the investigations are evaluated. The objects are to state what is currently known about the psychology of efficient work, to point out areas where knowledge is still insufficient, and to describe sound methods of research. Sources and other related literature are cited in footnotes. The book is suitable for college students who are studying industrial management. It is also of interest to graduate psychologists and personnel directors in industry.

SMYTH, RICHARD C., AND MATTHEW J MURPHY

Job evaluation and employee rating New York McGraw Hill Book Company Inc., 1946 255 p illus. 23 cm. (McGraw Hill industrial organization and management series, L. C. Morrow consulting editor) $3 00 2308

Contents: Part I, Job evaluation: Purpose and significance. Ranking and grading methods of job evaluation. Factor-comparison method of job evaluation. Point method of job evaluation. Comparison of job-evaluation systems. Job descriptions. Installing and maintaining the job-evaluation plan. Employee classification. Labor market wage survey. Determining the wage scale. Basic wage administration policies. Part II, Merit rating: Introduction to merit rating. Types of merit-rating plan. Some statistical and psychological problems in rating. Developing the merit-rating plan. Administering the merit-rating plan. Index.

Note. A concise but useful study of the outstanding types of systems used in American industry at the present time. Considerable attention is paid to the details of establishing a rating system in an organization and to the psychological aspects of its administration of it.

SPRIEGEL, WILLIAM ROBERT AND RICHARD H. LANSBURGH

Industrial management. Fourth edition. New York John Wiley & Sons, Inc., 1947 656 p. illus. 24 cm. $5 00 2309

Contents (abridged): Part I, Introduction. The historical background of industrial management. The management movement. Part II, Fundamental considerations in industry. Basic management decisions. Plant location. Part III, Organization structure. Types of organization. Organization, coordination, and morale. Product development and research. Processes and materials. Inspection. Part IV, The plant and equipment. The factory building and plant layout. Material handling. Light and power. Air conditioning. Part V, Motion and time study. Part VI, Wage payment—basic relation of employer and employee. The basis of industrial wages. Wage plans based on carefully established standards. Special forms of wage payment. Part VII, Buying, selling, and transportation. The sales department. The purchasing department. Control through the use of the budget. Managerial control through costs. Part VIII, Material and production control. Inventory control. Production control. Production control in diversified manufacturing. Production control in mass-production industries. Part IX, Personnel administration and management (industrial relations). The organization and policies of the personnel division. Employee service activities. Training in industry. The foreman, a representative of both men and management. Employee-employer cooperation. Industrial safety. Appendices: Explanation of General Motors organization chart. Details of standard nomenclature. Bibliography. Index.

Note (4431) A general treatment of the problems, ideals, and methods of successful industrial management. Both the theoretical and practical aspects are presented. The book is designed for use in college courses and also as an introductory survey for business executives and factory personnel. The first edition by Richard H. Lansburgh alone was published in 1923 and he was joint author of the third edition in 1940. The present edition, by William R. Spriegel, represents a rather extensive revision, without change of the book's plan and purpose, of the third edition. A chapter on maintenance departments has been added in Part IV, various parts of the text have been rewritten, the bibliography has been revised to include books published since 1940, and the index has been enlarged.

STANWAY H. GEDDES

Applied job evaluation a manual of installation and operating methods. New York The Ronald Press Company 1947 81 p illus. 24 cm. $3.50 2310

Contents. The basis of job evaluation. Step procedures in job evaluation. Installation and administration of a job evaluation plan. Review of methods of job evaluation. Reference reading. Index.

Note: The material in this practical book is based on the author's long personal experience in setting wage rates and job standards, first as a steel mill union official, then as head of an industrial engineering department, and later as a consulting management engineer. The book is designed to meet the specific needs of executives, supervisors, and personnel men who are not specialists in job evaluation but who must understand and possibly even institute and administer a job evaluation program. Samples of the necessary forms and charts are included.

THOMPSON CLAUDE EDWARD

Personnel management for supervisors. New York Prentice-Hall, Inc., 1948 192 p. illus. 24 cm. (Prentice-Hall industrial relations and personnel series, Dale Yoder editor) $3 95 2311

Contents: The human element in industry. The organization. Departmental managing and planning. The role of leadership in supervisory management. Selection and placement of personnel. Inducting and training workers. Operating an efficient department. Job evaluation and wage payment plans. Rating employees. Supervisory labor relations. Index.

Note. In this practical work the author stresses the importance of the human element in production and the difficulties arising from its variability. The chapters on the foreman's relations with his subordinates follow the familiar pattern, while the introductory analysis of the concept of organization and the foreman's place in it are an interesting contribution. The inclusion of the provisions of the Taft-Hartley Act which are of interest to the supervisor should enable the foreman to cope with the occasional conflicts arising from the fact of dual authority, the foreman's and the union representative's, in one department. The reader who looks for more information will find a few selected references at the end of every chapter.

THOMPSON JAMES EDGAR

Engineering organization and methods. New York McGraw Hill Book Company Inc., 1947 337 p illus. 24 cm. (McGraw Hill industrial organization and management series L. C Morrow consulting editor) $4 00 2312

Contents: Organization. Operation. Personnel. Cost control. Planning. Standards. Drawing and report numbering. Drawing forms and

title blocks. Drawing release. Drawing and print control. Advance engineering information. Drawing changes. Technical services. General services. Fundamentals of engineering management. Appendices: Typical engineering cost and time charge procedure. Typical cost-analysis investigations. Index.

Note: The subject of this book is the organization and management of the engineering departments of large companies. Much of the material is also applicable to the management of independent engineering firms. The subject is treated comprehensively. Most of the documents are detailed and many of the necessary records and forms are illustrated. The author was formerly chief engineer of the Booth Manufacturing Corporation and administrative engineer of the Ryan Aeronautical Company

TIFFIN, JOSEPH

Industrial psychology Second edition New York Prentice-Hall, Inc., 1947 553 p illus. 21 cm. $5.35 2313

Contents: The significance of individual differences in industry. The interview and related employment methods. General principles of employee testing. Mental ability and mechanical aptitude tests. Dexterity manipulative, and achievement tests. Tests of personality and interest. Visual skills and vision tests. Training of industrial employees. Industrial inspection. Industrial merit rating. Wages and job evaluation. Work, fatigue and efficiency Accidents and safety Attitudes and morale. Appendices: Elementary statistical procedures. Taylor-Russell tables. Publishers of tests. Index.

Note. (1235) A survey of the procedures and techniques employed by industry in the application of psychology to employee selection, merit rating, reduction of accidents, solution of visual problems, inspection accuracy training methods, and employee morale. This edition has been extensively revised and enlarged to incorporate recent developments in the field as reported in periodical literature of the subject. The footnote references have been brought up to date and new chapters added on interviewing methods and wage and job evaluation. A mathematical account of some elementary statistical procedures is again included in the appendix. The author is Professor of Psychology at Purdue University

TOOTLE, HARRY KING

Employees are people a manual of the human values in personnel management. New York McGraw Hill Book Company, Inc. 1947 350 p 24 cm. (McGraw Hill industrial organization and management series L. C. Morrow consulting editor) $4 00 2314

Contents: You get the job. You survey the job. The applicant. The hiring interview Testing for placement. Your staff and your paper work. Bosses and phony bosses. Getting the employee fitted to the job. Extracurricular troubles of employees Running the side shows. Unions, union men, and unionmen. Training. Employees and money matters. Measuring the job and the employee Moving across, up, down, and out. Foremen Putting out the news—and getting the news. Personnel budgets—statistics Directives—laws and lawyers. Women. Morale. Final Index

Note. An informal and lively discussion of the fine points of personnel administration, particularly in small industrial establishments. Standard subjects such as interviewing, aptitude testing, and pay scales are discussed but the author also passes along his opinions and some of his experiences with such problems as loan sharks who prey upon employees, maternity leaves, and how far the personnel director should go in interceding in personal matters. The author is Personnel Director of the New York *Times*.

YODER, DALE

Personnel management and industrial relations Third edition. New York Prentice-Hall Inc. 1948 894 p. illus. 24 cm. (Prentice-Hall industrial relations and personnel series Dale Yoder editor) $6 65 2315

Contents: Industrial relations and manpower management. The background of modern manpower management. Approaches to the study of industrial relations. Statistical tools for personnel administration. Job analysis and description. Manpower sources and recruitment Selection. The use of tests in selection Training for employment. Working hours. Service or efficiency rating Wages and wage policy Wage and salary administration. Maintenance of morale—problems Maintaining morale methods and procedures. Promotion and transfer Industrial accidents and illness. The stabilization of employment. Employee services. Collective bargaining: theory and practice. Collective bargaining: legal setting. Employment relationships in the public service. Personnel records and reports. Research in industrial relations. Appendices. Index.

Note. A standard work which serves both as college text and reference tool for students and active workers in the fields of personnel management and industrial relations. The treatment is comprehensive and provides survey and discussion of policies and practices now in current use. This edition has been revised and rearranged to include recent developments in the field. Discussions of job analysis and evaluation, industrial counseling, and wage and salary administration have been expanded and the use of tests in selection is treated in separate chapter Changes in federal and state legislation and the growth of labor unions have necessitated the rewriting of chapters on labor organizations and collective bargaining. Chapter bibliographies have been brought up to date with new references and the elimination of obsolete material. The author is Director of the Industrial Relations Center of the University of Minnesota.

YOUNGER, JOHN, AND JOSEPH GESCHELIN

Work routing, scheduling and dispatching in production. Third edition. New York The Ronald Press Company 1947 168 p illus. 24 cm. $3.50 2316

Contents: Work routing. Instruction forms Economics of materials. Analysis of operations. Importance of the machine. Economics of production equipment. Economics of mass production. Lot sizes. Interrelation of work routing, standardization, and cost accounting. Cost accounting for planning. Coordination of engineering and production Job shop planning. The Gantt chart in work routing. Centralized versus decentralized planning. Company policies. Quality control. Simulation. Tools, jigs, and fixtures. Planning from the sales curve. Materials handling. Production personnel. Planning the new building. Planning for expanding or tooling production. Rhythm in manufacturing. Sundry problems Index.

Note (4467) A reference manual for business executives, particularly those concerned with expediting production in order to lower costs and achieve maximum output. The volume suitable also as college textbook for students of industrial engineering. The treatment is practical however the fundamental principle underlying each step in the routing process is carefully explained, and examples of its successful operation are cited from the experiences of representative manufacturing concerns. In modernizing the work for its third edition practically every chapter has been rewritten and supplied with new illustrations representing the latest practices.

TIME AND MOTION STUDY

DERSE JOSEPH C

Machine operation times for estimators standard data and methods. New York The Ronald Press Company 1946 156 p. illus. 24 cm. $6 00 2317

Contents: Benefits of detailed estimating. Imposed limits on estimating with standard data. Element breakdown applicable to turret lathes and screw machines. Fundamental steps in the estimating of turret lathe and screw machine jobs. Turret lathe and screw machine cases. Estimating engine lathe operations. Estimating of drill press operations. Estimating of milling operations. Estimating of gear-cutting operations. Production grinding estimating. Estimating complete part. Index.

Note For the estimator of machine jobs in metal-working plants this book provides time studies which are the results of experience and long periods of testing. Accompanying the data are details of the operations performed, and of the conditions under which the tests took place. There are instructions for adapting the standard data to individual conditions and for making allowances in applying standard data to varying types of machines. The book is well illustrated, with photographs of the machines described, together with tables of specifications for these machines.

GOMBERG WILLIAM

A trade union analysis of time study Foreword by David Dubinsky Chicago Science Research Associates, 1948 243 p illus. 21 cm. (SRA industrial relations series) $4.25. 2318

Contents: The time study problem today. Time study in the field of scientific systems. Time study as scientific system. How accurate time-measuring instrument is wanted. Mechanical sources of variation. Accounting for the fatigue factor. Psychological sources of variation. Sociological sources of variation. Conclusion of Part One. Defining the job. The "normal" worker. Analyzing and accounting for allowance in the raw data. Standard data. A look backward. A look forward. Appendix. Bibliography. Index.

Note: A brilliant study of the scientific bases of time study together with critical review of currently accepted theories and techniques in the field. The author, who is Director of the Management Engineering Department of the International Ladies' Garment Workers Union, emphasizes the statistical aspects of scientific time study but pays due attention also to the psychological and physiological factors which affect the production of workers. The text is heavily documented with references to related literature, but the most significant portions of the book are the author's own contributions. The book is useful not as practical manual of techniques but as an examination of the philosophy of time study and presentation of criteria for fair and adequate systems.

Morrow Robert Lee

Time study and motion economy with procedures for methods improvement. New York The Ronald Press Company *1946* 338 p illus. 24 cm. $5 00 2319

Contents: Human problems of methods change. Operation analysis. Flow process charts and diagrams. Right- and left-hand process charts. How to do more work with less effort. Suggestion plans. Analysis techniques. Fundamentals and uses of time study. Time-recording equipment. Time study procedure. Terms used in time study. Leveling and rating. Synthetic leveling. Fatigue in industry. The interruption study. The ratio-delay study. Final computations. The standard data method. Organizing and training time study personnel. How to secure employee, union, and management cooperation. Straight-line production. Automatic machine studies and work assignments. Feeds and speeds for the cutting of metals. Appendix—minimum selected time method. Index.

Note: Most of this book deals with practical, up-to-date techniques that have been tested in many types of manufacturing plants. It is simply and carefully worded, and although directed mainly at managers of small factories, is suitable also as text for regular college courses in the subject. The discussions of worker fatigue and of ways for obtaining employee, union, and management cooperation are particularly useful. No bibliography is included, but there are occasional footnote references.

Mundel, Marvin Everett

Systematic motion and time study New York Prentice-Hall, Inc., 1947 *232* p illus. 24 cm. $4 00 2320

Contents: What motion and time study can accomplish. The human factor. How to start the analysis. Simple product analysis. Process charts for man analysis. Operation charts. Man and machine charts. Multi-man charts. Micromotion study. Stop-watch time study. Applying motion and time study standards. Synthetic times. Process charts—product analysis. Problems. Bibliography. Index.

Note: Useful both as college text and as practical manual of the subject, this book provides condensed well-organized treatment of motion and time study. Basic principles are stressed. Illustrative examples are examined in great detail so that the reasoning processes involved are discernible. The graphic analyses used in these illustrative problems are presented in the form in which they would normally appear in practice. A feature of the bibliography is selected list of articles on motion and time study arranged by industry as, for example, printing, rubber, steel and iron, textiles.

Nordhoff, William A.

Machine-shop estimating. New York McGraw Hill Book Company Inc., 1947 486 p illus. 21 cm. $6 00 2321

Contents: The machine-shop estimator and his function. The estimator's tools. How to make tables and use them. What goes into an estimate. Machining elements—turning and allied operations. Machining elements—boring and allied operations. Machining elements—facing and allied operations. Machining elements—threading and tapping operations. The turret lathe family. Automatic screw machines and turret lathes. The vertical turret lathe. The machine-shop lathe (engine lathe). The automatic lathe. The light boring mill. Drilling machines and drill operations. Milling machines and milling operations. Profilers and routers. Shapers. Grinders and grinding operations. Tapping and threading. Broaching machines and broaching. Hobbing machines—gears, splines, and serrations. Power hack saw and abrasive-cutoff machines. Oxyacetylene metal cutting. Appendices. Index.

Note: A useful manual that is based on material originally prepared at the Douglas Aircraft Company for the speedy training for new workers during World War II. The treatment is concise and practical. A considerable part of the text is given over to descriptions of machine tools and their functions. This material is supplemented by an imposing number of data tables useful in estimating and by many reproductions of photographs of machines, diagrams, charts and forms for the recording of data.

Presgrave Ralph

The dynamics of time study Second edition. New York McGraw Hill Book Company Inc., 1945 238 p illus. 23 cm. (McGraw Hill industrial organization and management series, L. C. Morrow consulting editor) $3.00 *2322*

Contents (abridged): Time study and "scientific" management. Implications of measurement. Time study as measurement. Mainly the stop watch. The correction factor. Leveling. The distribution of human capacities. The range of human capacities. Range and frequency in productive operations. Time study incentives, and the range of effort. The three problems of time study. Effort rating—the problem—the training—the application—the significance of pattern. Allowances. Summary. Index.

Note: This text is intended for more advanced students, or for professional or business men concerned with the study of industrial efficiency. The major stress is on the theory and principles of time study although the application of theory to practice is given some mention in later chapters. One basic theme of the text is that time study is form of measuring and must conform to the recognized functions of measurement. A few changes have been made in this edition notably in rewriting and enlarging the chapter on leveling and in newer and more detailed presentation of the subject of interference in the chapter on allowances. The author is an industrial consultant and director in charge of manufacturing of the York Knitting Mills Ltd., of Toronto, Canada.

Shevlin James D

Time study and motion economy for supervisors. Chicago National Foremen's Institute, Inc. 1945 73 p. illus. 21 cm. $2.00 2323

Contents (abridged): Motion economy. Time study. Charts and diagrams.

Note: Intended for the foreman rather than the time-study engineer this small volume is boiled-down treatment of elementary principles and techniques. The author states that any job can be analyzed into four general elements: operations, transportations, inspections and storages, system to which he has given the name *OTIS*. The exposition is made clear by short paragraphs, terse language, and an abundance of charts.

QUALITY CONTROL

Columbia University Statistical Research Group

Sampling inspection principles procedures, and tables for single, double, and sequential sampling in acceptance inspection and quality control based on percent defective, by the Statistical Research Group Columbia University Applied Mathematics Panel Office of Scientific Research and Development. Edited by H. A. Freeman, Milton Friedman, Frederick Mosteller (and) W Allen Wallis. New York McGraw Hill Book Company, Inc. 1948 395 p illus. (part col d) 24 cm. $5.25 2324

Contents (abridged) Part I, Introduction Nature, purposes, and scope of this book. Part II, Principles of sampling inspection for attributes: Sampling inspection as an acceptance program. Properties of sampling-inspection plans Installation and operation of sampling plans. Use of sampling inspection for quality control. Appendix to Part II. Relation of sampling inspection to design specifications. Part III, A standard sampling-inspection procedure: Establishment of standards Installation of the procedure. Review of past results. Suggested forms. Part IV Construction of sampling tables and standard procedure The standard procedure for selecting sampling plans. Methods of computation. Part Tables Summary of sampling plans, classified by acceptable-quality level and sample-size letter Sample-size letters for average outgoing-quality limit (AOQL) classes and acceptable-quality level (AQL) classes. Sampling plans and operating-characteristic (OC) curves, classified by sample-size letter and by acceptable-quality level (AQL) and average outgoing-quality limit (AOQL) References. Glossary Index.

Note Sampling inspection, that is, the evaluation of the quality of given lot or "run of product by inspecting only part of the lot, was subjected to considerable investigation during World War II, and both the techniques and the essential statistical tables were considerably improved, especially by the Statistical Research Group. This book is based upon the work of the Group and upon earlier work by the Bell Telephone Laboratories and others. It is designed for peacetime use and covers both production and acceptance sampling The treatment is on practical but advanced level.

ENRICK, NORBERT LLOYD

Quality control a manual of quality control procedure based upon scientific principles and simplified for practical application in various types of manufacturing plants. New York The Industrial Press 1948 122 p illus. 23 cm. $3 00 2325

Contents Fundamentals of inspection. Procedure in installing lot-by-lot inspection. Sampling continuous products. Installing process inspection. Special control charts for use when equipment is old and worn. Applying quality control in the plant. Tolerances and allowances in interchangeable manufacture. Mass production gaging. Use of inspection data in establishing specifications. Management aspects of quality control. A typical case history Statistical basis of modern quality control Mathematical theory of control charts. Common interchangeable terms Index.

Note A simplified nonmathematical explanation of statistical quality control methods, and the manner of their application in industry It is intended to serve as practical guide for plant inspectors, and such theoretical matters as the law of probability and the science of statistics are relegated to the two final chapters. These chapters are not essential to the understanding or use of the rest of the volume, and may be omitted by the reader who is not mathematically prepared for them.

GRANT EUGENE LODEWICK

Statistical quality control. New York Mc Graw Hill Book Company Inc., 1946 563 p illus. 23 cm (McGraw Hill industrial organization and management series L. C Morrow consulting editor) $5.00 2326

Contents (abridged) Part one What will statistical quality control do? Objectives of statistical quality control. Some representative applications Part two The Shewhart control chart for variables: Some fundamental statistical concepts Directions for simple $\bar{X}$ and R charts Different adaptations of the control chart for variables. Part three, Other Shewhart control charts Some fundamentals of the theory of probability The control chart for fraction defective. The control chart for defects Part four A statistical approach to acceptance procedures: Some statistical aspects of tolerances. Evaluating the quality assurance of sampling plans. Single and double sampling. The Dodge-Romig tables Part five, Making statistical quality control work Some cost comparison problems involved in statistical quality control. The place of statistical quality control in representative manufacturing and inspection operations. Appendixes Glossary of symbols. Bibliography Tables. Index.

Note Chiefly this book is an exposition of the mathematical and statistical theory and methods that form the basis for quality control procedures. It is written for persons who expect to make considerable practical use of control charts and sampling plans and who want careful, fairly advanced explanation of the probability theory of both. The author has examined the applicability of quality control to large variety of manufacturing operations and has illustrated his discussion with analyses of actual case histories but has included relatively little on the personnel aspects of the introduction of quality control methods. There is an extensive bibliography

JURAN, JOSEPH M

Management of inspection and quality control New York Harper & Brothers 1945 233 p $3 00 2327

Contents The quality specification. Measurement. Accuracy of inspection. Conformance. Acceptance sampling. Control sampling. Lines of inspection authority in the plant. The line inspection functions. Optional inspection functions. Inspection staff functions. Wage determination for inspectors. Top management control of the inspection department. Quality-mindedness. Introducing system of modern quality control techniques. Bibliography Index.

Note Addressed primarily to plant executives, design engineers, and shop supervisors, this book deals mainly with the management aspects of quality control, techniques, and programs. The mathematical and statistical aspects of quality control are not stressed, but selected literature on these phases of the subject is listed in the bibliography The author was formerly Chief of the Inspection Control Division of the Western Electric Company

KENNEDY CLIFFORD W

Quality control methods. New York Prentice-Hall Inc. 1948 243 p. illus. 24 cm. $4 75 2328

Contents (abridged) Part 1 Acceptance sampling: Sample size. Sampling tables. Double sampling Sequential sampling. Part 2, Batch control—per cent defective methods; Grand lot system. The error inherent in sampling Practical applications of per cent defective methods. Part 3 Distributions and the standard deviation. Frequency distributions. The standard deviation. Estimating lot quality Part 4 Average and range Comparison between standard deviation and average-range methods. Interpretation and use of charts. Practical application of average-range method Part 5, Guide to the administration of methods; Where and how to start quality control techniques Commercial examples of applications. Bibliography Appendix. Index.

Note An introductory exposition in which the basic principles and techniques of quality control are explained in some detail and with the use of frequent references to common experience. The treatment is very elementary nevertheless it is adequate for many persons who wish only to make practical use of the knowledge in small manufacturing plant or to understand procedure in operation in large establishment. The author is Quality Control Engineer of the Federal Products Corporation.

RICE WILLIAM B

Control charts in factory management. New York John Wiley & Sons, Inc. 1947 149 p illus 23 cm (Wiley mathematical statistics series) $2 50 2329

Contents. Statistical quality control—what it is and what it does. The role of inspection. Statistical control. $\bar{X}$ and R charts. p and pn charts. Case histories of control charts. Organization of statistical-quality-control program. Index.

Note. An introductory treatment but not popularization. It is written in the terminology of the subject, but the author has covered only those aspects that are of interest to executives of manufacturing organizations and other persons who need practical rather than statistician's understanding of control charts. Charts based on the inspection of variables and the inspection of attributes are both discussed; and the exposition is pointed up with fifteen case histories from industry The last chapter tells how to install statistical-quality-control program in factory.

RUTHERFORD JOHN G

Quality control in industry methods and systems. New York Pitman Publishing Corporation, 1948 201 p. illus. 24 cm. $3.50. 2330

Contents Part I, General principles: Functions and responsibilities Organization. Economics of quality control. Control of quality. Inspection department costs. Reports and records. Personnel training. Relations to other departments. Customer representatives. Part II,

Statistical methods. Principles of statistical methods. Sampling inspection. Process control. Specialized applications. Further specialized applications. The practical application of statistical methods. Appendix. Index.

Note. A text which provides an overall study of the general principles of quality control and of the statistical techniques employed. This, together with its discussion of the organization, functions, and services of the quality control department, makes the book of value to industrial managers who are considering the installation of statistical quality control methods.

SMITH, EDWARD STAPLES

Control charts an introduction to statistical quality control. New York McGraw Hill Book Company Inc., 1947 161 p illus 24 cm. (McGraw-Hill industrial organization and management series, L. C. Morrow consulting editor) $3 00 2331

Contents: Statistical quality control. Frequency distributions. Control charts for averages and ranges. Control charts for fraction defective, for number of defectives, and for number of defects. Three-sigma limits. Tables. Index.

Note: This book has been written expressly for small manufacturers and other persons who need to understand the practical aspects of quality control without going deeply into the mathematical principles. The mathematical bases are not omitted, but are explained lucidly and relate directly to the making and use of charts in the control of manufacturing and inspection. The author's exposition reads so easily that experts also will enjoy the book.

SAFETY ENGINEERING

BRANDT ALLEN DEMMY

Industrial health engineering. New York John Wiley & Sons, Inc., 1947 395 p illus. 24 cm. $6.00 2332

Contents: Industrial atmospheric contaminants and their industrial hygiene significance. Evaluating industrial atmospheric health hazards. Principles of control and methods employed. General ventilation. Local exhaust ventilation—hood design. Design of local exhaust systems. Collectors. Exhausters. Measuring air flow in industrial ventilation. Control measures for common operations and for an industry. Exhaust systems—specific design data and illustrations of installations. Respirators and protective clothing. Heating, ventilating, and air conditioning for temperature, humidity comfort, and odor control. Radiant energy. Industrial illumination. Industrial noise and its control. Plant sanitation and hygiene. Bibliography. Appendix. Index.

Note: The author who is Industrial Hygiene Engineer of the Bethlehem Steel Company defines his specialty as "The science of maintaining the worker environment in condition conducive to good health, that is keeping all harmful environmental exposures away from workers. His work contains comprehensive discussion of practical methods of protecting workers, and it is written from the point of view of the engineer directly in charge of the program. The text is supplemented by diagrams, many tables of useful data, and twelve-page bibliography

COPOLYMER OPERATING COMMITTEE

Safety manual for operation of copolymer laboratories Second edition. Reconstruction Finance Corporation Office of Rubber Reserve, Washington, D C Washington D C. Government Printing Office, 1947 54 p illus. 23 cm. Paper $0.25 2333

Contents: Part Introduction. General laboratory safety. Physical testing laboratory safety rules and procedures. Chemical laboratory safety rules and procedures. Emergency procedures affecting laboratory operations. Recommended safety features for construction of laboratory buildings. Part II Introduction. Safety in handling hydrocarbons. Summary of mandates relating to handling butadiene. Flammable and explosive hydrocarbon mixtures. C_2, C_3, C_4 hydrocarbons. C_5 hydrocarbons. Styrene. Appendices. Suggested sample bomb types and handling procedures. Safety holder for placing stoppers on tubing. Wooden crate for 5-gallon bottles. Toxicity of various materials.

Note: This manual was prepared to promote the adoption of standard operational methods for copolymer laboratories that would afford maximum safety for the personnel. The manual, which was developed voluntarily by and for the companies operating copolymer plants in the synthetic rubber program, was prepared by sub-committee of the Copolymer Operating Committee. Its first edition was approved on trial basis in February 1946; the second edition was approved by the Copolymer Operating Committee in October of the same year. Part contains recommendations relating to various phases of laboratory operation. Part II is mandatory in compliance with the action of the Copolymer Operating Committee. Three folding diagrams are included in the illustrations. The authors state, "Certain practices contained herein may be applicable to other laboratories engaged in comparable work.

DALLA VALLE, JOSEPH MARIUS

The industrial environment and its control. New York Pitman Publishing Corporation, 1948 225 p illus. 23 cm. $4.50 2334

Contents: Problems and trends. Psychrometry. The atmospheric environment. Illumination and radiant energy. Noise, vibration, and fatigue. The thermal environment. Industrial ventilation. Design of local exhaust hoods. Design of exhaust systems. Measurement of air flow. Air pollution. Industrial dust collection. Appendix. Index.

Note. A compact treatment which is suited chiefly to engineers who may be called upon to design ventilating systems and other devices which may affect the health of workers in factories. In other words, the book is written for the type of specialist who is coming to be known as industrial health engineer and who is an engineer rather than medical man. The material is authoritative and well presented, but the range of topics is somewhat less broad than might be expected.

DICKIE, ALEXANDER L

Production with safety New York McGraw Hill Book Company Inc., 1947 242 p. illus 24 cm. (McGraw Hill industrial organization and management series, L. C. Morrow consulting editor) $3.50 2335

Note An informative book regarding the work of safety engineer and the functioning of formal accident prevention programs in industrial concerns. The author has successfully presented his material in the form of conversations between safety engineer and various members of large manufacturing company. In the introductory chapters the safety engineer outlines the fundamentals of his work, draws up program of safety procedure, and illustrates how the program is put into effect. The remaining chapters, given as series of foremen's meetings, discuss the various aspects of accident prevention including the relationship of safety engineer and foremen, accident cause and analysis, direct and indirect accident costs, eye protection, and fire protection. Throughout the volume the author stresses the fact that accident prevention to both personnel and machines is vital factor in the maintenance of production efficiency

FATZINGER, ROBERT WILLIAM

Safety practices in dredging and hydraulic mining. Washington D C. Government Printing Office, 1948. 76 p illus. 23 cm. (United States. Bureau of Mines. Bulletin 470) Paper $0.25 2336

Contents: Scope of report. Importance of placer mining. Description of placer dredges. Description of hydraulic mining. Employment and accidents in dredging and hydraulic mining. Causes of dredging accidents and their prevention. Machinery. Falls of persons. Handling materials. Hand tools. Electricity. Boiler explosions or bursting steam pipes. Other causes. Fire protection on dredges. Safety organization. Causes of accidents in hydraulic mining and their prevention: Cave of bank. Falls of persons. Handling materials. Hand tools. Handling rocks. Hydraulic giants. Machinery. Other causes. Fire protection. Safety organization. Bibliography

Note Describes in turn the various types of accidents met in dredging and hydraulic mining and gives definite recommendations for the prevention of each. The paper is based upon observations made and the records received in visits to Alaska in 1946 and to California in 946 and 1947. Data from thirty active dredging operations and thirty-four active hydraulic operations are included.

LIPPERT FREDERICK G

Accident prevention administration New York McGraw Hill Book Company Inc. 1947 159 p illus 23 cm (McGraw Hill industrial organization and management series L. C. Morrow consulting editor) $2 75 2337

Contents: Part 1, Principles and procedures: Accident prevention—a management function. Collection and evaluation of accident data. Training and follow-up. Inspection and correction. Union participation. Part II, Operating techniques The staff accident-prevention specialist. Designing policy and procedure. Installation and operation of the program. Bibliography Appendix: Industrial-accident control—five-hour course for supervision. Proposed health, safety group-insurance, and compensation clauses, revised. Index.

Note. Preoccupation with costs, in continuing effort to lower them, is of necessity one of the major functions of management in industrial establishments. This small but thorough book describes in considerable detail how to reduce operating costs by cutting down the number of plant accidents, thereby lowering medical, legal, and compensatory insurance charges, and also minimizing decreased production due to lost time damaged machinery, and spoiled material. The author is Manager of Personnel Administration for the Raytheon Manufacturing Company

NATIONAL SAFETY COUNCIL INCORPORATED

Accident prevention manual for industrial operations Chicago National Safety Council Incorporated, 1946 534 p illus. 23 cm $14.00 2338

Contents: Plant design and layout. Construction and demolition. Permanent equipment and facilities. Guarding and operating machinery. Materials handling and storage. Electrical hazards. Chemical hazards. Fire and explosion hazards. Flammable liquids. Hand and portable power tools. Commercial vehicle operation. Personal protective equipment. Industrial hygiene Safety organization and program (including accident records and analyses and computation of rates) Supplement—National Safety Council services and materials. Index.

Note. The very nature of safety engineering, which requires thorough analysis of each specific operation, makes it impossible to present in one volume the details of accident prevention procedure for all industries. This manual, therefore, provides comprehensive outline of principles and good practices for the common industrial operations. The treatment is practical and includes extensive tabulations of data concerning dangerous chemicals, fireproofing compounds, standards of illumination, strength of scaffolds, dimensions of stairways, etc. The volume is intended for use as reference tool by safety engineers and foremen, and supplements rather than replaces the technical publications issued by the National Safety Council.

UNITED STATES NATIONAL BUREAU OF STANDARDS SAFETY CODES SECTION

Safety for the household. Third edition. Washington, D C. Government Printing Office, 1947 190 p illus. 23 cm. (United States. National Bureau of Standards. Circular 463) Paper $0 75 2339

Content (abridged) Introduction. Instruction of children *Publications for the householder* Chemical hazards: Acids and caustics. Cosmetics, drugs and medicines. Food and water *Fumigants, disinfectants, and insecticides.* Paints, varnishes, etc. Polishing and cleaning materials. Refrigerants. Electrical hazards: Household electrical appliances. Interior wiring. Outdoor electrical hazards. Private electric-lighting plants. Fire hazards: Bonfires. Celluloid. Chimneys, flues, and fireplaces. Christmas trees. Cigars, cigarettes, and pipes Electricity Fire-fighting equipment. Fire-retardant treatments. Flammable liquids. Grease. Heating and cooking appliances. Rags and rubbish, spontaneous ignition. Gas hazards: Installation and care of gas piping Leaks. Appliances, their selection, installation, and care. Flexible tubing Carbon-monoxide poisoning. Lightning: Personal protection. Protection of buildings and livestock. Mechanical hazards. Automobiles. Falls Firearms. Handling materials. Hand tools. Machinery Miscellaneous hazards. Suggestions for building home Fire-resistive construction. Exterior structural elements. Interior construction. First aid. Poisoning. Artificial respiration. Tables.

Note A reference volume of hazards commonly encountered in the household, together with suggested means of eliminating or reducing them. This edition has been rewritten to take into account new trends in house design and new equipment. Among other changes it contains new sections on television, miniature gasoline engines, and lily and fish ponds in gardens.

AGRICULTURE

GENERAL

BLACK, JOHN DONALD, AND OTHERS

Farm management by John D Black, Marion Clawson Charles R. Sayre, and Walter W Wilcox. New York The Macmillan Company 1947 1073 p illus 24 cm. $5 75 2340

Contents (abridged) Part I, Introduction The farm management function. The ends of farming. Farming in changing world. Part II, Systems of farming: The management of one-crop farming. Specialized livestock farms. Diversified crop farms. Feed-and-livestock farms. Crop-and-livestock farming. Production for use of the farm family Part III, Principles and methods of analysis: The location of agricultural production. Size of farms. Adjusting farm production to markets and prices Farming costs. Accounts, records, and surveys. Part IV Problems of management The management of farm equipment. The management of labor on farms. The management of land. The management of rented farms. Financing the farm business The valuation of farm property The role of public agencies in farm management. Part Management by types of farming: Wheat farming. Cotton farming. Sugar and specialty crops. Irrigation farming. Fruit and nut farming. Vegetable farming Dairy farming. Poultry farming. Cattle ranching. Sheep ranching. The management of farm woodland. Part-time and self-sufficing farmers. Part VI Finale: Agriculture in the national economy Index.

Note: A comprehensive work written from the viewpoint that farming is business based on applied science. It is designed primarily for use as textbook in agricultural colleges and the treatment assumes that the reader ill have some knowledge of agricultural methods and of fundamental economic principles. The necessity for analyzing farm operations from the economic standpoint is constantly stressed, and variety of case histories of such analyses are included. The fifth part contains tabloid analyses of the economic situations of the important types of farming in the United States. The bibliographical material consists of selected lists appended to the chapters.

BOSS ANDREW AND GEORGE A. POND

Modern farm management, principles and practice. St. Paul, Minn. The Webb Publishing Company 1947 494 p. illus. 21 cm. $5 00 2341

Contents (abridged) Introductory History and development of farm management Part I, Elements involved in farming. Natural resources in relation to farming Economic forces modify production trends Characteristics of types of farming. Part II, Farm organization Principles of soil and crop management involved in farm organization. The place of livestock in farm organization Planning the physical organization of the farm. Budgeting farm business. Part III, Farm operation Principles of farm operation. Measures of management in farm operation. Keeping the work program. Farm work simplification. Equipment for economic operation. Farm marketing problems Part IV Farm management services and related problems Useful farm records. The use of capital and credit in farming Farm marketing organizations Planned production programs. Legal matters relating to farm business. Appendix. Index.

Note An introductory but inclusive treatment of good management practices, especially in relation to the grain and livestock farming which is characteristic of the middle western region of the United States. The book is designed primarily for agricultural college students, but is also useful to practical farmers Many useful economic data are included but there are very few references to related literature

BRUNNER EDMUND DE SCHWEINITZ AND OTHERS editors

Farmers of the world the development of agricultural extension. Edited by Edmund de S Brunner Irwin T Sanders and Douglas Ensminger New York Columbia University Press, 1945 208 p 23 cm. $2.50 2342

Content About the others. Introduction What extension is, by D Ensminger and I. T Sanders. Nonliterate societies: Diversity and change in the culture of nonliterate peoples, by S. T Kimball. Extension work in the Pacific islands, by F M Keesing. Peasant societies Characteristics f peasant societies, by I. T Sanders. Promoting cooperative agricultural extension service in China, by Hsin-Pao Yang. Extension experience in India, by D S. Hatch. Extension work among the Arab fellahin, by A. I. Tannous. Extension in the Balkans, by C. E. Whipple. Extension work in Latin America, by C. P Loomis. Euro-American society: Euro-American rural society by C. C. Zimmerman. Extension in the United Kingdom, by R. Rae. Agricultural extension services in northwest Europe, by P L. Yates and L. A. H. Pieters. Agricultural extension in the United States, by E. de S. Brunner and C. B. Smith. Conclusion The role of extension in world reconstruction, by M. L. Wilson and E. de S. Brunner Index.

Note. A survey of the problems and experiences in various parts of the world in instructing rural people in improved agricultural practices and other matters that affect their well being. Each author has discussed the problems in his particular region against the cultural background and economic situation of the farmers there. The primary aim of the volume is to aid in pointing the way to the most effective procedures.

BUEL JESSE

Jesse Buel, agricultural reformer Selections from his writings edited, with introduction, by Harry J Carman. New York Columbia University Press 1947 609 p illus 22 cm. (Columbia University studies in the history of American agriculture. No 12) $6 75 2343

Contents (abridged) Introduction. Selected articles: The farmer. On improved farming. Agriculture should be patronized by the government. Importance of education to farmers and mechanics. Agricultural schools. A state board of agriculture. The science of agriculture. Common school libraries Hints to young farmers. Judge Buel's successful system of farming on light land. Lectures and addresses On improvement in horticulture. On the practicability and means of improving our agriculture. The farmers' companion The importance of agriculture to nation. Some of the principles of the new husbandry Earths and soils. Analogy between animal and vegetable nutrition. Improvement of the soil by animal and vegetable manures. Improvement of the soil by mineral manures. Improvement of the soil by draining Principles of tillage. Operations of tillage. Alternation of crops Root culture On the cultivation of grasses. On the germination of seeds. Appendix. Glossary Index

Note Jesse Buel, 1778–1839 was one of the earliest advocates of applying science to the improvement of agricultural techniques in America Not only did he purchase run-down farm and transform it into an experiment station where the worth of his ideas was tested, but he wrote and lectured widely This is well-selected collection of his writings.

BULLOCK BENJAMIN FRANKLIN

Practical farming for the South. Second edition. Chapel Hill, N C. The University of North Carolina Press 1946 526 p illus. 21 cm. $2 75 2344

Contents Part One, Plant production Soils and soil fertility Plant growth and reproduction. Plant propagation. Improvement of plants. The home garden The home orchard. Field crops. The farm woodlot. The rural home and its surroundings Part Two, Animal production Feeding and care of farm animals. Improving

farm animals. Milk production for the farm house. Pork production on the farm. The farm poultry flock. Honey bees on the farm. Part Three, Farm financing and literature. Credit for small farm operators. Farmers' cooperatives. Farm publications. Note on plowing. Appendices: Farmers continue to plow. What about DDT? Electricity on the farm. Battery brooders. Index.

Note: The purpose of this volume is not only to be of use as a handbook to farmers and as a textbook to students but also to serve as an introduction to the basic principles of farming for the benefit of teachers and rural social workers. The common farm operations are discussed in detail not only for the benefit of beginners but also to guide established farmers in good practices. The second edition covers certain subjects somewhat more fully than the original edition of 1944 and also includes discussion of new developments of general interest in the field of agriculture such as rural electrification, new methods of insect control, and new methods of tillage. Although written by a Southerner the book does not particularly emphasize the "southern" aspect, except for the sections dealing with such crops as cotton and tobacco. An excellent bibliography is included, which lists not only books and government pamphlets, with their publishers, dates and prices, but also farm magazines and papers.

DEERING FERDIE

USDA, manager of American agriculture. Norman Okla. University of Oklahoma Press, 1945 213 p illus 21 cm. $2.50 2345

Contents: Definition of a dirt farmer by Benton R. Blackwood. When to sow and when to reap. Streamlined duplication. He who holds the pocketbook. The needle and the haystack. The number one problem. Famine of plenty. Uncle Sam, the farmers' banker. Scientific policemen. Special services for particular needs. Education and information. The new USDA. Tomorrow's agriculture. Appendix: Department of Agriculture appropriations, fiscal years 1933 to 1945 inclusive.

Note: A critical account of the United States Department of Agriculture and of its place in American agricultural economy describing its organization and advocating the elimination of "its needless bureaus and unnecessary functions." The book was "written with the hope that it would be helpful in stimulating thought and action that would lead to remedying the deficiencies of the USDA, thus making a more prosperous nation with security for the dirt farmer." The author is editor of one of America's leading agricultural periodicals, *The Farmer-stockman.*

FORSTER GARNET WOLSEY

Farm organization and management. Revised edition New York Prentice-Hall, Inc. 1946 490 p. illus 23 cm. $5.35 2346

Contents: The nature of modern farming. The nature of farm management. The development of farm management. The problems of farm organization. Selection and combination of farm enterprises. The standard combination of farm enterprises. Using the standard systems. Specialized and diversified farming. Units of measurement. The economics of farm practices. Farm layout. Size of the farm. Selection and acquisition of the farm. Selection of farm machinery and power. The differential nature of management. The management of labor and working capital. New forms of management in agriculture. Economic aspects as aids to management. Farm records. Farm accounts. The share rental contract. The cash rental contract. Credit for farm operations. Index.

Note: (4710) This textbook for agricultural colleges combines the practical aspects of the subject of farm management with theoretical discussion and analysis, integrating general economic principles, as they apply to farm management, with adequate discussion of sound farm practices. The text divides itself roughly into two parts, the first dealing with the organization of the individual farm, the second with its management. Each chapter concludes with series of questions and of bibliographical references. The revised edition incorporates the following features: up-to-date statistics, added chapters on farm accounting, enlargement of the chapter concerning the selection and acquisition of farm power, additional data on management, and general revision of minor points.

GREENSHIELDS ELCO L editor

Irrigation agriculture in the West. Washington D C Government Printing Office, 1948 39 p illus. (part col d) 29 cm. (United States Department of Agriculture. Miscellaneous publication no 670) Paper, $0.50 2347

Contents: Irrigation in agricultural production. Organization for irrigation purposes. The future of irrigation development. Physical and climatic setting of irrigation development. Water supply and use in the West. How land is used in the West. Irrigated crops in the West. An expanding irrigation agriculture.

Note: This pamphlet describes the uses and potentialities of irrigation agriculture in the seventeen western states of the United States. It does not attempt to describe the techniques of irrigation. A feature of the publication is its collection of large maps of the West, many of them in color showing the following: major river basins of the West; value of irrigated crops as percent of value of all crops; natural vegetation areas; irrigated and potentially irrigable lands; average annual precipitation; moisture regions; frequency of dry years by areas; average length of frost-free season; great soil groups; water supply in western rivers; normal seasonal flow of western streams; annual variation in stream flow; major areas irrigated by surface water; changes in ground-water levels; major land use areas; cropland acreage; pasture land not forested; forest and woodland acreage; acreage of irrigated land; farms with irrigated land; value of selected irrigated crops in percent of the total value of all irrigated crops: food grains, feed grains, hay and forage, cotton, truck and vegetable crops, seed crops, sugar crops, fruits and nuts.

HARDING THOMAS SWANN

Two blades of grass a history of scientific development in the U S Department of Agriculture. Norman, Oklahoma University of Oklahoma Press, 1947 352 p illus. 22 cm. $3.50 2348

Contents (abridged): Part I: Preliminaries. Agricultural science in the Patent Office. Early research in the Department of Agriculture. Part II: Achievements. Test tube magic. The bugs crawl out. All flesh is grass. Man can help to make a tree. Nation-wide research subsidy. Science at the milk pail. Agricultural engineering triumphs. Part III: Departures. Man on wheels. Birds and beasts. Fraud in foods and drugs. Part IV: Values. Value of pure research. Appendix: The publication of research. Index.

Note: Although not published under government auspices, this comprehensive narrative of the history and accomplishments of the U S Department of Agriculture combines the validity of an official account with the more general appeal of the trade book. The author has for many years been a member of the Department of Agriculture staff. His book is an interesting review of the evolution of the Department to its present status and a full account of its tremendous contributions in the fields of pest control, soil testing, plant improvement, pure food standardization, domestic and wild animal life, forest preservation, etc. Actual dollar savings resulting from the Department's programs are emphasized, as, implicitly are the values of long-range plans for conservation, "pure" research, and scientific investigation for its own sake. There are frequent references to departmental publications, but no bibliography as such.

HUTCHISON CLAUDE BURTON, editor

California agriculture, by members of the faculty of the College of Agriculture, University of California. Berkeley University of California Press 1946 444 p illus. (part col d) 24 cm. $5.00 2349

Contents: The historical background of California agriculture, by F Adams. Wealth pyramiding in the production of livestock, by G. H Hart and collaborators. The rich pattern of California crops, by W F Tufts and collaborators. Protecting plants from their enemies, by R. E. Smith and collaborators. Exploring the soils of California, by H. Jenny and collaborators. The economic and social structure of California agriculture, by M. R. Benedict. Index.

Note: A comprehensive historical survey of California's agricultural development since 1769. Much information is given on economic aspects, and the various accounts are carried down to about 1941. Diversity of crops and farm specialization are pointed out as the two salient features of this development. The trend toward cooperative marketing and the social and economic problems arising from the enormous influx of foreign labor and residents of other parts of the country are discussed with the view toward probable solutions. Due consideration is given also to the scientific and technological contributions of the College of Agriculture of the University of California to the improvement of farming methods, [illegible]

ration of crop production, plant protection, irrigation, and soil conservation.

IOWA STATE COLLEGE AND THE IOWA AGRICULTURAL EXPERIMENT STATION

A century of farming in Iowa, 1846–1946 by members of the staff of the Iowa State College and the Iowa Agricultural Experiment Station. Published in commemoration of the one hundredth anniversary of Iowa's statehood. Ames, Iowa The Iowa State College Press, 1946 357 p illus 24 cm $5.00 2350

Contents: An overview by Earle D. Ross. Struggle for land ownership by W. G. Murray. The soil that grows the crops, by J. B. Peterson and A. J. Englehorn. Growing the bumper corn crop, by G. F. Sprague and J. C. Cunningham. The fields of waving grain by H. D. Hughes. Forage crops that feed the livestock and save the soil, by H. D. Hughes and M. E. Heath. Winning the fight against plant diseases, by I. C. Gilman and M. Hennessey. Man and nature battle injurious insects, by Carl J. Drake. Weeds that challenge Iowa crops, by A. L. Bakke, R. H. Porter and E. P. Sylwester. Hog raising—a big business, by W. A. Craft and A. L. Anderson. Iowans feed beef cattle for market, by P. S. Shearer. The development of Iowa's high-producing dairy cattle, by C. Y. Cannon. Sheep production in the livestock enterprises, by W. F. La Grange. Horses pull Iowa into prominence, by A. B. Caine. Eggs and meat from Iowa poultry by George F. Stewart. Combating animal diseases—and winning, by C. Murray. Growing fruits, vegetables, and flowers, by B. S. Pickett, A. T. Erwin, E. S. Haber H. L. Lantz, H. E. Nichols, and E. C. Volz. Trees of our times—and pioneer times, by G. B. MacDonald. Bees—the beneficial insect, by F. B. Paddock. Dairy product output from Iowa farms, by M. Mortensen. The marketing phase of Iowa farm living, by R. H. Thompson. The role of machinery in Iowa farming, by J. B. Davidson. Trends in farm structures, by Henry Giese. Agricultural journalism in Iowa, by K. R. Marvin. The farm standard of living in Iowa, by E. E. Hoyt. Schools for the farm boy and farm girl, by M. L. Cushman. Farmers' organizations, by L. B. Schmidt. The pattern of farm management, by John Hopkins. Index.

Note: This volume provides detailed yet diversified account of the origins and growth of farm practices in state where 213,000 farms embrace 95 percent of the area of the state. Although limited to this one state, it is in many respects typical of the history of agricultural America during the past century

JOHNSON SHERMAN ELLSWORTH AND OTHERS

Managing a farm, by S E. Johnson N W Johnson O J Scoville M. R. Cooper and S W Mendum. New York D Van Nostrand Company Inc. 1946 365 p illus 21 cm (The Van Nostrand farm handbooks under the supervisory editorship of Gove Hambidge) $3 45 2351

Contents: Farming as business and way of living. Little farms, big farms, and family farms. Types of farming and farming regions. Deciding on the size of the farm. Getting started in farming. The right start for part time farmer. Planning the farm layout. Selecting and using farm equipment. The farm work program. Getting the highest return from each enterprise. Planning the farm for profit and stability. Aids to farm planning. Useful records. Summarizing and using records. Working with others on management problems. Improving the management of family farms. Index.

Note: A practical, elementary discussion of agricultural economics and farm management for actual and prospective farmers. It was prepared originally as an official educational manual to aid members of the American Armed Forces in choosing occupations for peacetime after discharge from military service. It has been revised and enlarged in this edition. The senior author is Head of the Division of Farm Management and Costs of the United States Department of Agriculture.

NICKERSON DOROTHY

Color measurement and its application to the grading of agricultural products a handbook on the method of disk colorimetry Washington, D C. Government Printing Office, 1946 62 p. illus 26 cm. (United States. Department of Agriculture Miscellaneous publication 580) Paper $0.25 2352

Contents: Introduction. Color-grading problems. Color charts in grading work. Transparent-color standards in grading work. Standards need measuring. Several methods of expressing results of color measurement. Disk colorimetry. Application of disk colorimetry to grading problems. Applications of Munsell notations in related problems. The Kelly mask method for color matching. Standard names for colors. A. S. A. standard for the specification and description of color. Color-tolerance specifications. Artificial daylighting for grading work. Color-vision testing. Literature cited.

Note. A general introduction to color measurement for those interested in the subject as it relates to grading such agricultural products as cotton, hay honey beef, and tobacco. It is also intended as handbook in the method of disk colorimetry. Bibliographical references are given in footnotes, in addition to the concluding bibliography of 76 items.

PEARSON HAYDN SANBORN

Successful part-time farming. New York Whittlesey House, McGraw Hill Book Company Inc. 1947 322 p illus. 21 cm. $3.00 2353

Contents (abridged): How much acreage? Important points for beginners. A primer on soils. Irrigation—major secret of big profits. Power for part-time farming. Efficient tools and the farm shop. The permanent garden. The home orchard. Milk goats. The family flock of hens. Rabbits for inexpensive meat. Homecrafts as profitable side line. Small greenhouse business on part-time farm. Strawberries. Asparagus. Winter squash. Peaches. Overcoming the hazard of frost. Bees. Turkeys. Other ways to turn dollar. Appendix: List of helpful, low-cost bulletins. Index.

Note: An elementary manual for persons who operate small farms to supplement their income from other occupations, and for persons who are thinking of doing so. The treatment is unpretentious and practical. References are included in the text itself to numerous publications of the state and national departments of agriculture and some material is quoted from these publications. There is no other bibliography

ROBINSON EDWARD NORTH AND CAROLYN ROBINSON

The "have-more" plan for a little land—a lot of living. New York The Macmillan Company 1947 326 p illus. 24 cm. $3 49 2354

Contents (abridged): Why we moved to the country and what we set out to accomplish. Setting up homestead. Houses especially designed for country living. Water, sanitation, electricity roads. Plans for small barn. The importance of raising part of your family's food. The kind of berries and grapes money can't buy. Two ways to have tree fruits on small place. Really fresh eggs—and chicken whenever you want it. Geese grow on grass. A small turkey flock can be profitable sideline. Ducks are easy to raise. Squab. Ham, bacon, pork, lard. The miniature dairy. Veal and beef on the homestead. Our little sugar factory. Home wine making. Winter gardens—cold frames, hot beds, and small greenhouses. Grow your own fish. The woodlot. Transportation and power. Homekeeping on homestead. Homestead mechanics. Record keeping—painless style. Bibliography. Index.

Note. One of the more successful books of its kind. It is based on the actual experiences of the authors, and it is addressed mainly to residents of cities in the United States who wish to live in adjacent rural areas and raise part of their own food or operate small part time farming enterprises. Its basic theme is that rural life is more satisfactory than city life, particularly for families of small income. The practical and some of the human aspects of selecting, developing, and operating subsistence farms are discussed in simple, persuasive language.

SHANNON, FRED ALBERT

The farmer's last frontier agriculture, 1860–1897 New York Farrar & Rinehart, Inc., 1945 434 p illus. 24 cm. (The economic history of the United States Vol. v) $5 00 2355

Contents: Nature and the farmer. Agricultural settlement in new areas. Disposing of the public domain. Land and labor in the new South. Southern crops and special problems. The progress of farm mechanization. The expansion of prairie agriculture. Special problems of prairie farmers. The livestock frontier and the Great Plains farmer. Finance and marketing problems of the range country. Specialized agriculture and eastern adjustments. Governmental activity in agriculture. The agrarian uprising. Farmers' cooperative movements. The farmer and the nation. The literature of the subject. Appendix. Index.

Note. A well-documented history of American agriculture in the latter half of the nineteenth century. The emphasis throughout the work is on the economic aspects, but there is much specific information on prices of livestock and other crops and the earnings of farm labor as well as on the larger economic aspects. However there is also a good deal of information on the farming techniques and agricultural implements of the period. The chapters on the settlement of the last large areas of public land are of special interest. The author is Professor of History at the University of Illinois.

UNITED STATES DEPARTMENT OF AGRICULTURE

Science in farming Washington D C. Government Printing Office 1947 944 p illus. 24 cm. (United States Department of Agriculture. Yearbook of agriculture 1943–1947) $2 00 2356

Content (abridged) Backgrounds: Men who went before. What is farm research? Animals. Breeding better livestock. Drugs to control parasites. Animal diseases. New ideas in feeding. Thyroprotein for cows. Artificial breeding. Hormones in reproduction. Vitamin A for dairy cattle. What to feed a cow. Advances in feeding calves. Cross-breeding dairy cows. Progress in hog production. Developments in sheep. News about goats. Breeding better poultry. Feeding poultry. Horses and mules. Plants: Genetics and breeding. Plant growth regulators. Day length and flowering. About hydroponics. Finer strawberries ahead. Healthier tomatoes. The story of hybrid onions. Breeding healthy potatoes. Soybeans for the South. New kinds of sugarcane. Saving our sugar beets. New kinds of tobacco. What makes cotton good? New varieties of wheat. Corn hybrids for the South. Disease-resistant oats. Tailor-made sorghums. Grasses for hay and pasture. New legumes for the South. Trees. Better timber from farms. Hybrid forest trees. Forests for old fields. Soils. Better soils, better food. Organic matter in soils. Soil organisms and disease. Ways to till the soil. Managing surface runoff. The control of salinity. Phosphate fertilizers. Use of nitrogen fertilizers. The liming of soils. The use of minor elements. Making more of irrigation. Insects: The chemistry of DDT. Aerosols for insects. New insect repellents. DDT in the home. Crops that resist insects. Control of forage pests. Insecticides for cotton. Orchard insecticides. Insecticides for vegetables. Controlling pests of stock. News about bee diseases. More honey from bees. New products. New uses for farm crops. Penicillin. Rutin for the capillaries. Dairy byproducts. New goods from wood. Uses for vegetable wastes. Starch from wheat. Paper from flax. Food and clothing: Known nutrients in milk. Unidentified nutrients. Dried foods in the house. Freezing food at home. Fabrics without mildew. New practices. Some new farm machines. Air war against pests. Machine-made forests. Equipment for all crops. Sugarcane culture. Storing grain in small bins. Shell cooled potato storage. Pests in stored products. Fungi in forest products. Advances in rodent control. New trends in marketing. Conclusions. Index.

Note. Alfred Stefferud, editor, writes in his "Note to the reader": "This book was prepared primarily for farmers, but we have always had in mind other persons whose interests and work have to do with gardening, chemistry, beekeeping, stock raising, conservation, horticulture, homekeeping, and such." The articles were written by various specialists in the Department of Agriculture. There are extensive sections of photographic illustrations, and many of the articles are accompanied by brief lists of references. The volume was the first after 1942 in an annual Yearbook series begun in its present form in 1936 and interrupted by World War II.

UNITED STATES DEPARTMENT OF AGRICULTURE. OFFICE OF FOREIGN AGRICULTURAL RELATIONS

Agricultural geography of Europe and the Near East. By Lois B Bacon, Reginald G Hainsworth, Naum Jasny, Clarence M Purves, Lazar Volin and Clayton E. Whipple. Washington, D C. Government Printing Office 1948 67 p illus. (part col d) 27 cm. (United States. Department of Agriculture. Miscellaneous publication no 665) Paper $1 00 2357

Content Introduction. Explanation of maps and graphs. Production, trade and consumption of agricultural products in Europe, excluding the Soviet Union. Climate. Average annual precipitation. The temperature and frost-free season. Natural vegetation. The soils of Europe. Soil profile. A, B, C horizons. Soil properties. Description of natural soil groups. Uplands. Lowlands. Mountains. Conclusion. The population of Europe and the Near East. Land utilization. The principal regions. Zone of summer rains. Zone of summer drought. The crop pattern. Intermediate crops. Light-soil, cool-climate crops. Root crops. Ample-moisture, cool-climate crops. Semi-moisture crops. Mediterranean crops. Crops of minor world importance. Conclusions. The livestock industry: Summer-rain zone. Summer-drought zone. Europe's position in international agricultural trade. Wheat. Corn. Sugar. Tobacco. Cotton. Wool. Flaxseed. Olive oil. Other vegetable oils. Europe-United States trade.

Note. Maps and charts, some in color, show in graphic manner the agricultural geography of Europe and the Near East, including population, altitude, climate, vegetation, soils, and crop and livestock statistics. The brief texts accompanying the maps give economic, historical, or physical facts; where the subject is of basic importance, such as soils, rainfall, etc., there is additional information presented in the main body of the text. Accurate postwar figures on European agriculture not being available, the base period for data used in preparing most of the maps is 1935–37.

UNITED STATES TENNESSEE VALLEY AUTHORITY DEPARTMENT OF AGRICULTURAL RELATIONS

Food at the grass roots the nation's stake in soil minerals Knoxville Tenn. Tennessee Valley Authority 1947 100 p illus. 23 cm. Paper $0.30 2358

Contents: Program report. Design for plenty. Nature's design: the Indian pasture. Design by Congress: the TVA mandate. Soil minerals: the critical 5 percent. Phosphorus: bottleneck of the world's hunger. Grass roots laboratory: how TVA's test-demonstration technique mobilized 38,000 farmer-scientists. Five steps to plenty: the test-demonstration ladder and some farmers who are climbing it. Rural communities in motion; what soil minerals have done. Toward a national soil fertility policy.

Note. The TVA here reports both for technical and for general readers the experience of the first ten years in the task of utilizing the water, the soil, and the mineral resources of the Tennessee Valley for the improvement of agriculture through a comprehensive program of development. Data are presented on all phases of the program, including agronomy, agricultural economics, rural sociology, soil chemistry and chemical engineering, and animal and human nutrition.

WHITE, JOHN MARION

The farmer's handbook. Norman, Oklahoma University of Oklahoma Press, 1948. 440 p illus. 24 cm. $4 95 2359

Contents: Grain crops. Legumes and grasses. Fiber and oil crops. Other field crops. Sugar and sirup crops. Garden and truck crops. The orchard. Trees on the farm. Berries. Beef cattle. Dairy cattle. Hogs. Horses, mules, asses, ponies. Sheep and goats. Poultry and rabbits. Feeds and feeding. Soil conservation. Beekeeping for beginners. Fish and wildlife. Farm engineering. A little about pets. Index.

Note. A compact but rather satisfactory reference book of information about farming practices and farm crops in the United States. The amount of space given to specific topics varies from a few lines to several pages, but in most instances the information is adequate for ordinary needs. References to publications of the United States Department of Agriculture and other sources of fuller information are frequent. The book is particularly useful for its tabular and other forms of compact statements of useful information, such as descriptions of the diseases of cattle, the comparative values of different feedstuffs, the requirements of various crops for fertilizer material, and the composition of standard fruit and vegetable sprays. There is an eight-page glossary and the index is very detailed. The author has had an extensive experience in practical farming and he has served also as a county agricultural agent.

WILCOX EARLEY VERNON

Modern farmers cyclopedia of agriculture a compendium of farm science and practice on field garden fruit and orchard crops and the care, feeding and diseases of farm animals New York Orange Judd Publishing Company Inc., 1946 511 p illus. 24 cm. $4.50 2360

Contents (abridged) Part I, Field crops. Part II, Garden crops. Part III, Fruits and nuts. Part IV Beef cattle and dairying. Part V Other live stock Horses, Swine. Sheep. Part VI, Poultry Chickens. Ducks. Guinea fowls. Turkeys. Part VII, Drainage, fertilizers, irrigation, soils, etc. Part VIII, Miscellaneous: Agricultural experiment stations. Farm labor Frozen food lockers. Power on farms. Index.

Note. A comprehensive handbook of agricultural information. The main arrangement is by large subjects as indicated in the contents. Within each section specific topics are dealt with rather compactly but the principal facts that are useful in practical agriculture are usually stated.

SOILS AND FERTILIZERS

ANDREWS WILLIAM BAKER

The response of crops and soils to fertilizers and manures. First edition. State College, Miss. Published by W B Andrews 1947 459 p. illus. 23 cm. $4.50 2361

Contents (abridged) Crop response to sources of nitrogen. The use of anhydrous ammonia and aqua ammonia as sources of nitrogen. The use of cyanamid as the source of nitrogen. The effect of fertilizers on the available lime, phosphate, and potash in soils. Calculating the effect of fertilizers on the lime content of soils The use of legumes to supply nitrogen. The effect of leguminous green manures on the lime and potash content of the soil. The effect of harvesting nitrogen, phosphorus, potash, and other elements in crops on the yield of crops which follow Soil organic matter The agricultural importance of lime. The response of crops and soils to phosphorus. The response of crops to potash and soda. Production and use of commercial nitrogenous fertilizers. The effect of placement of fertilizers on the yield and stand of crops. Returning the nitrogen, phosphorus, and potash harvested in crops the soil in manure. Fertilizing ponds for fish production. The effect of fertilizers on the yield and feeding value of hay and pasture crops. Index of authors. Index of subjects.

Note. Intended as textbook for students and as handbook for farmers, this volume brings together data formerly scattered in the literature of agronomy and discusses its significance. Specifically it accumulates representative information on the response of crops and soils to fertilizers and manures, it organizes the data so that it may be easily interpreted, and it evaluates the data in terms of normal cost of fertilizers and prices of crops. Bibliographical sources for the data are presented at the ends of the chapters.

BAVER, LEONARD DAVID

Soil physics. Second edition New York John Wiley & Sons Inc., 1948 398 p. illus. 24 cm. $4 75 2362

Contents: Introduction. Mechanical composition of soils Physical characteristics of soil colloids. Soil consistency Soil structure Soil water Soil air Soil temperature. Physical properties of soils and tillage. Physical properties of soils in relation to runoff and erosion. Index of authors. Index of subjects.

Note: (4729) An agronomic treatment rather than an engineering one. The work is designed for college students—advanced undergraduates and graduates—and it is based on the author's survey of the available literature as well as on his own research. Detailed mathematics has been avoided, although differential equations occasionally make their appearance. The present edition represents modernization by addition of new material principally on electron microscope investigations of soil particle shapes, soil-moisture relationships, soil structure and aeration, plowing, and raindrop relationships to erosion. As in the first edition the chapter references lists cite representative literature of the subject in the English, French, German, and Russian languages.

BEAUMONT, ARTHUR BISHOP

Garden soils their use and conservation Illustrated. New York Orange Judd Publishing Company, Inc. 1948 280 p illus. 22 cm. $3.50 2363

Contents: Foreword. The soils that feed us. Garden soils and sites. Organic matter for garden soils. How to improve garden soils. Tillage of garden soils. Conservation of garden soils. Composts for the home garden. Soil fertility and fertilizers. The use of fertilizers. Odds and ends. Soil, vegetables, and health. Selected references. Appendix: Approximate content of certain plant nutrients in nitrogen, phosphoric acid, potash, calcium oxide, and magnesium oxide. Glossary Index.

Note: Intended primarily for home vegetable gardeners, this book presents the findings of soil science and recent advances in knowledge of plant nutrition in as non-technical language as is possible. Much of what is written may equally well be applied to flower gardening. The author was formerly Professor of Soils at the University of Massachusetts.

COLLINGS GILBEART HOOPER

Commercial fertilizers their sources and use. Fourth edition Philadelphia The Blakiston Company 1947 522 p illus. (part col d) 24 cm. (Blakiston books on agriculture, Gilbeart H. Collings consulting editor) $4.50 2364

Contents (abridged) Origin and development of use of commercial fertilizers. Source, production, and use of sodium nitrate. Manufacture and use of ammonium sulfate. Manufacture and use of ammonium nitrate. Manufacture and use of synthetic nitrogenous fertilizers. Sources and uses of organic nitrogenous fertilizers. Sources and use of the mineral phosphates. Sources and uses of bone phosphate and basic slag. Manufacture and use of the superphosphates. Use of ammonia solutions as sources of nitrogen in mixed fertilizers. Production, manufacture, and use of the potash fertilizers. Fertilizers carrying the secondary essential elements—sulfur calcium, and magnesium. Fertilizers carrying the rarer essential elements. Adjusting soil reaction and fertilizer practice to crop requirement. Principles underlying the use of fertilizers. Application of fertilizers, and their influence on germination and seedling growth. Bibliography Index of proper names. Subject index.

Note (4737) A comprehensive survey in which both the major aspects of the subject and the minor ones, such as the effects of various systems of fertilizer placement in the field and the fertilization of fish ponds, are all discussed. The book is used as an agricultural college textbook and also as reference manual by farmers and county agricultural agents. An extensive bibliography is included. Compared to the previous edition, the book now contains one new chapter and considerable number of shorter revisions throughout the text. However the author found it impractical to bring the statistical information up to date.

FAULKNER, EDWARD HUBERT

A second look. Norman University of Oklahoma Press 1947 193 p 21 cm. $2.00 2365

Contents (abridged) Real soil Substandard soils. Rewards for your work. Soil "needs." Nature's soil makers. Vanishing past The treachery What we eat. Real food. The farmer's income. Future farming.

Note. (4730) In his Plowman's folly issued by the same publisher in 1943 the author attacked the use of the plow in agriculture and advocated instead system of surface cultivation which was designed to add large quantities of organic matter to the top few inches of soil. The book started good deal of controversy and many articles were written—some of which attacked and some of which defended, the author's statement. In this sequel the author answers some of the criticisms that were made and he sets forth further the some of his original claims, but mainly he strengthens his case by citing additional experience with his system, and by presenting additional evidence in support of the importance of organic matter in agricultural soils.

GUSTAFSON AXEL FERDINAND

Using and managing soils. New York Mc Graw Hill Book Company, Inc., 1948 420 p

illus 24 cm. (McGraw Hill rural activities series W A. Ross consulting editor) $2.80 2366

Contents: Getting acquainted with the soil. Selecting land for farming and country living. Tilling and managing crop soils. Controlling water in soils. Controlling soil erosion. Managing acid soils. Managing alkali soils. Keeping up organic matter and nitrogen in soils. Conserving and using farm manures. Growing and using green-manure crops. Selecting and using commercial fertilizers. Planning systems of crop rotation. Managing pasture soils. Managing garden, fruit, and lawn soils. Keeping soils productive over the years. Appendix. Visual aids Index.

Note. A relatively simple presentation of the subjects mentioned in the chapter titles It is designed for vocational agricultural courses and for reading by farmers. Modern conservation and cultural practices are described in fair detail and from the practical standpoint, but there are no references to related literature.

KELLEY, WALTER PEARSON

Cation exchange in soils New York Reinhold Publishing Corporation, 1948 144 p 24 cm. (American Chemical Society monograph no 109) $4 50 2367

Contents: History of cation exchange. The cation-exchange material. Cation-exchange equations. Principles of cation exchange. Exchange capacity and kind of exchangeable cation in various soil types. The determination of exchangeable cations. Cation exchange in relation to soil properties. Identification and estimation of the clay materials. Bibliography Index.

Note: The understanding of cation exchange, phenomenon one aspect of which enables soils to take up potassium and ammonium, hold them against leaching, and yet make them available for plant food, has undergone considerable change since the process was first discovered and named "base exchange. This monograph discusses and summarizes present-day knowledge regarding the theories and basic principles of this process. It is based on the author's own research and upon thorough study of the literature of the subject.

KITCHEN HERMINIE BROEDEL, editor

Diagnostic techniques for soils and crops their value and use in estimating the fertility status of soils and nutritional requirements of crops. Washington 6 D C. The American Potash Institute 1948 308 p illus. 25 cm. $2 00 2368

Contents Historical introduction, by Firman E. Bear Chemical methods for assessing soil fertility by Michael Peech. Correlation of soil tests with crop response to added fertilizers and with fertilizer requirement, by Roger H Bray Operation of state soil-testing service laboratory by Ivan E. Miles and J. Fielding Reed. Operation of an industrial service laboratory for analyzing soil and plant samples, by Jackson B. Hester Plant-tissue tests as tool in agronomic research, by Bert A. Krantz, Werner L Nelson, and Leland F Burkhart. Plant analyses—methods and interpretation of results, by Albert Ulrich. Biological methods of determining nutrients in soils, by S C. Vandecaveye Visual symptoms of malnutrition in plants, by J. E. McMurtrey J Index.

Note A comprehensive discussion by group of soil scientists of both the underlying theory and the practical application of new methods devised in recent years to aid farmers in fertilizing their crops more effectively The book emphasizes the fact that, since all diagnostic methods are designed for the purpose of estimating the fertility status of soils and the nutritional requirements of crops, the different methods are to be regarded as complementary and not competitive. The chapters have extensive bibliographies.

ROSS WILLIAM HORACE AND OTHERS

Preparation of ammonium nitrate for use as a fertilizer by William H Ross J Richard Adams, J Y Yee, Colin W Whittaker and Katharine S Love Washington, D C Government Printing Office, 1946 80 p illus 23 cm. (United States. Department of Agriculture. Technical bulletin no 912) Paper $0 20 2369

Contents Fertilizer materials containing ammonium nitrate. Preparation. Physical properties: Crystal form. Microscopic examination. Apparent density Hardness of particles. Solubility Determination of moisture content. Hygroscopicity Rate of moisture absorption. Factors in caking tendency Large-scale tests on storage behavior. Effect of bags on storage behavior Drillability Literature cited.

Note Reported here are the investigations on the production of satisfactory ammonium nitrate fertilizer undertaken by the Division of Soils, Fertilizers, and Irrigation between 1943 and 1945 at the request of the War Production Board. The tendency of ammonium nitrate to cake and to absorb moisture from the air under humid conditions was found to be overcome by suitable water repellents and conditioning agents.

WORTHEN, EDMUND LOUIS

Farm soils their management and fertilization. Fourth edition. New York John Wiley & Sons, Inc. 1948 510 p. illus. 21 cm. (The Wiley farm series A. K. Getman and E. R. Eastman editors) $3.24 2370

Contents: Selecting the soil and planning its management. Growing the crop. Draining and irrigating soils. Controlling soil erosion. Tilling the soil. Manuring. Liming. Fertilizing. Replenishing nitrogen and supplying organic matter. Managing field soils. Managing pasture soils. Managing garden, greenhouse, and lawn soils. Managing fruit soils. Appendix. Index.

Notes: (4755) A simply-worded book used both as textbook in agricultural schools and as practical guide by farmers. Each chapter is divided into two parts—a practical section which describes essential soil practices, and theoretical section which explains the underlying reasons for performing particular operations. Specific instructions are included on how to drain and irrigate fields, and how to improve farmland by growing the right crops, by correct use of fertilizers, manures, and green-manure crops. In this edition the former section on soil erosion has been expanded to form whole chapter and minor revisions have been made elsewhere in the text. The bibliography printed in the third edition has been omitted.

CONSERVATION OF NATURAL RESOURCES

BENNETT, HUGH HAMMOND

Elements of soil conservation. New York. McGraw Hill Book Company Inc., 1947 406 p illus 21 cm. $3.20 2371

Contents The erosion problem in the United States. Extent of erosion. Effects of erosion. How erosion takes place. Rates of erosion and runoff. Climate and soil erosion. Rainfall penetration. A national program of soil conservation. Planning for conservation of soil and water Use of vegetation in soil and water conservation. Contouring. Terracing. Channels and outlets. Gully control. Control of erosion on stream banks. Water spreading. Wildlife and soil conservation. Small dams for water storage. Stubble-mulch farming. Farm drainage. Farm irrigation. The place of trees and shrubs in soil and water conservation. List of visual aids. Index.

Note. An elementary but fairly inclusive treatment of the subject. Its chief use is as a textbook in agricultural schools, but it is useful also as source of general information on the economic significance of soil erosion, on the activities of the various United States governmental agencies interested in soil conservation, and on the practical techniques of preventing and retarding erosion.

GRAHAM EDWARD HARRISON

The land and wildlife. New York Oxford University Press, 1947 232 p illus. 22 cm. $4 00 2372

Contents Wildlife heritage. Three centuries. First the land. Marshes and swamps. Ponds and waters. Streambanks and ditches. Field borders and roadsides. Windbreaks and hedges. Gullies, odd areas, and spoilbanks. Cropland, pasture, and woodlot. Forests and range. Wildlife prospect. The cost and the harvest. Wildlife, land and people. Bibliography Index.

Note In treating the specialized problem of how to protect American wildlife in our competitive economy the author has succeeded in combining textbook popular treatise, and practical manual. Without minimizing the value of game preserves and other governmental activities, he devotes the major part of his study to convincing exposition of the land practices which must be adopted by

the individual farmer. Practical kinds of man-made protection are discussed and described in detail; the results of earlier experiments are listed; and available statistics in actual dollar and cents gain to the farmer are presented. Photographs are numerous and excellent, and the bibliography extensive.

GREENE LEE SEIFERT AND OTHERS

Rescued earth a study of public administration of natural resources in Tennessee. By Lee S. Greene, Virginia Holmes Brown and Evan A. Iverson. Knoxville Tenn Published for the Bureau of Public Administration by The University of Tennessee Press 1948 204 p. illus. 23 cm. $2.25 2373

Contents: The growth of conservation administration. Resource conservation in the present. Administrative management. Financing resource conservation. Administrative relationships. Physical achievements in conservation. Retrospect. Index.

Note A treatise on federal, state, and local administration of natural resources in the state of Tennessee including waters, minerals, forests, public lands, fish, and wildlife, and including the Tennessee Valley Authority. The legal substructure of resource management rather than the inventory of natural resources is emphasized.

OSBORN FAIRFIELD

Our plundered planet. Boston Little, Brown and Company 1948 217 p. 20 cm. $2.50 2374

Contents: Part One, The planet: The long view. The dim yet potent years. The new geologic force—man. Life begets life. The history of science. Part Two, The plunderers: Asia—then and now. Mediterranean lands and Africa. Russia. Europe, England and Australia. The New World. Conclusion. Acknowledgments. Bibliography and reading list.

Note A thoughtful but nonetheless passionate plea for drastic and large-scale action toward the conserving of the natural resources of the earth, particularly its soil. The underlying theme is that man is only one element in a complex biological scheme, but he is the element which alone has the power and apparently the will to throw the entire plan out of balance. Most of the book is devoted to accounts of the damage which already has been done and some of the larger effects of it already observed. In the last part the author makes some well considered proposals for remedying the situation.

POPE JAMES BENFORD AND OTHERS

Investigations in erosion control and reclamation of eroded sandy clay lands of Texas, Arkansas, and Louisiana at the Conservation Experiment Station, Tyler Tex. 1931–40 by J B Pope James C. Archer P R. Johnson A. G McCall, and F G Bell. Washington, D C. Government Printing Office, 1946 76 p illus. 23 cm. (United States. Department of Agriculture. Technical bulletin 916) Paper $0.20 2375

Contents: Summary and land use recommendations. Introduction. The problem area: Nature of the area. Erosion and runoff history. The station. Purpose and plan of experiments: Control-plot installations. Field plot studies. Watershed studies. Contributing records. Experimental results: Rainfall characteristics and erosion. Control-plot experiments. Field areas. Watershed studies. Discussion of experimental results. Literature cited. Appendix. Detailed tabular records of precipitation, runoff, erosion, etc 1931–40.

Note: A report of technical advances in conservation farming as developed through study and research for the agricultural region served by the Conservation Experiment Station at Tyler Texas The methods used for the increase of crop yields and the basic principles involved are both shown. The report is also intended to serve as a manual or handbook for soil and water conservation technicians working on such soils as the eroded sandy clay lands of Texas, Arkansas, and Louisiana. It is a guide to such practical matters as determining degrees of slope for terrace channels, the expectancy of protection to be derived from various kinds of cover crops, and the amount of water likely to be conserved from the average rains for crop use under various tillage treatments. Other reports in the same series which contain similar data for other farming regions are *Investigations in erosion control and the reclamation of eroded land at the Northwest Appalachian Conservation Station 1934–42* (Technical bulletin no. 888) 91 p., $0.20; *Investigations in erosion control and reclamation of eroded Shelby and related soils at the Conservation Experiment Station Bethany Missouri*, 171 p., $0.30; *Investigations in erosion control and the reclamation of eroded land at the Missouri Valley Loess Conservation Experiment Station, Clarinda, Iowa, 1931–42* 84 p $0.30.

SEARS PAUL BIGELOW

Deserts on the march. Second edition Norman Okla. University of Oklahoma Press 1947 178 p illus. 20 cm. $2 75 2376

Contents Introduction to second edition by Louis Bromfield Man, maker of wilderness. The wisdom of the ages. Hungry Europe. Poor Richard, poor Lo. The scratched. From hunters to combine. The great pattern. Cold figures. Only God can make a tree. Leaves of grass. Mud. Wet deserts. Dust. It must be the weather. Pests. The way through. Where is the sun? Deserts in retreat.

Note (4767) A well-written popular account of events which reduced to deserts what were once fertile areas of the United States. The author describes the mistakes which have been made in the treatment of forest and grass lands, and outlines the steps which can and are being taken to rectify these mistakes. The concluding chapter, which tells of the advances made in the conservation of our soil resources in the period 1935–1947 is new in this edition and there are several other changes.

SHEPARD WARD

Food or famine the challenge of erosion. New York The Macmillan Company 1945 225 p illus 20 cm. $4 00 2377

Contents: Erosion and hunger. Natural and human forces in the soil crises. The Democratic revolution in soil conservation. The organization of forest management. Public controls over land use. A land reconstruction work corps. Public acquisition of low-grade land. Financing land reconstruction. Our lands control our cities. Integral watershed development. Agricultural science and education. Toward world conservation. Index.

Note A carefully considered approach to soil conservation as a world wide problem. The author's survey of the steps so far taken in the United States toward soil conservation, forest management, and river control is followed by recommendations for a long-range program of cooperation between land owners and government agencies. Considerable space is given to the legal and financial problems involved in public acquisition and management of land that cannot be effectively managed by private owners. Action necessary for carrying out a program of public ownership is outlined.

TRIPPENSEE REUBEN EDWIN

Wildlife management upland game and general principles. New York McGraw Hill Book Company Inc., 1948 479 p illus. 24 cm. (The American forestry series, Walter Mulford, consulting editor) $5 00 2378

Contents (*abridged*) Farm wildlife: The farm as a wildlife habitat. Cottontail rabbit. Pheasants. Bobwhite quail. Tree squirrels. Forest wildlife: Wildlife management in the forest. Black bear. Deer. Ruffed grouse. Wild turkey. American woodcock. Wilderness wildlife: Management of wilderness areas. American elk. Bighorn sheep. Grizzly bear. Moose. Pronghorn antelope. Rocky Mountain goat. Woodland caribou. Diseases and parasites of wild animals, by E. C. O'Roke. Miscellaneous wildlife relationships: Predatory relationships. Game production and harvest. Refuges. Winter feeding. Wildlife administration. General references. Index.

Note. In this work, of which the present volume is the first published, the basic knowledge of wildlife which is essential to planning and conservation programs, and the techniques of managing fields and forests so as to insure the maintenance of the wildlife population, are both covered in detail. The author is Professor of Wildlife Management at the University of Massachusetts, and his treatment of the subject is more scientific than is sometimes found in books on this subject. The chapters are accompanied by extensive lists of references to the related literature. The work is suitable for use in college courses and also as a reference book by professional workers in the field and by librarians.

VOGT, WILLIAM

Road to survival with an introduction by Bernard M Baruch. Illustrations by Stuart I Freeman. New York William Sloane Associates, Inc., 1948 335 p illus. 22 cm. $4 00 2379

Contents Introduction, by Bernard M. Baruch. The earth answers back. Energy from earth to man. As mankind thinketh. Industrial man—the great illusion. That the sea be fitting. The long knives. The land on edge. Man-spawn and war-spawn. Man versus geography The dying land The Bear and the Lizard. History of our future. References. Reading list. Index.

Note The author's experience as conservationist and his ability as stylist are utilized to present his grim thesis with force and clarity He maintains that the civilized world is bent on self-destruction through the avenues of land depletion and overpopulation. Although major emphasis is given to the problem in the United States of America, other regions (especially Latin America) are not ignored. Salvation is suggested through drastic reforms in conservation of natural resources, and an intelligent program of birth control—the possibility of both being predicated upon education public financing, and wise legislation. The book is non-technical in language and is addressed directly to the layman. Its dramatic tone may alienate number of scientifically trained readers he would prefer greater objectivity of presentation. There are diagrams, references to textual citations, and short annotated list of suggested further reading.

FARM MACHINERY AND BUILDINGS

JAMES F LINCOLN ARC WELDING FOUNDATION

Welding helps for farmers Cleveland Ohio The James F Lincoln Arc Welding Foundation, 1947 431 p illus. 23 cm. U.S $1 00 foreign countries $1 50 2380

Contents Purpose and work of James F Lincoln Arc Welding Foundation. Farmers quickly become welders Arc welders whittle metal. Equipment for welding Setting up the farm workshop Tips on welding methods Repair work with arc welder Welder salvages broken and worn equipment. Making equipment for special jobs. Tillage tools and posthole diggers Tractors and hitches Carts, trailers, and wagons. Manure loaders and other back savers. Harvesting tools and elevators Welded forms for many purposes. Shop tools and power saws. Appendix Glossary Index

Note During 1943–46 the James F Lincoln Arc Welding Foundation of Cleveland conducted an educational program in which farmers and other persons directly associated with agriculture were granted cash awards and scholarships for submitting papers describing successful uses of arc welding on the farm The present volume contains excerpts from the prize-winning papers, many of which describe highly ingenious time- and labor-saving innovations Photographs and drawings accompany the text. The book constitutes an unusual supplement to the standard books on farm mechanics.

JONES MACK MARQUIS

Shopwork on the farm. New York McGraw Hill Book Company Inc. 1945 486 p. illus. 23 cm (A McGraw Hill practical manual) $3.50 2381

Contents Providing and equipping farm workshop. Sketching and drawing. Woodwork and farm carpentry Painting, finishing, and window glazing Sharpening and fitting hand tools. Rope work. Harness and belt work. Concrete work. Soldering and sheet-metal work. Cold metal work Forging, tempering, and etching Pipework and simple plumbing Repairing and reconditioning machinery Maintaining electrical equipment Definitions of shop terms Index.

Note Practical information on the use of tools, the materials, and the various skills needed in maintaining and repairing farm buildings and machinery forms the content of this book. It is designed for use in agricultural courses in high schools and colleges and as reference book on the farm Outstanding features are an abundance of clear illustrations and summarized lists of the practical points of particular operations such as welding

SCHAENZER JOSEPH PETER

Rural electrification. Fourth revised edition. Milwaukee The Bruce Publishing Company 1948 338 p. illus. 24 cm. $3 76 2382

Contents Electricity the silent partner How electricity is made and distributed. Serving the farmer Wiring materials. Wiring maintenance and repair Wiring the farmstead. Wiring the house. Wiring the barn and outbuildings. Lights and lighting. Electric motors. Fractional-horsepower motor applications. Ensilage cutters. Feed grinders. Wood sawing. Hay hoisting and mow curing. Farm water supply Electric power for irrigation. Poultry-house lighting. Electric poultry equipment. The pig brooder The milking machine and cream separator Dairy refrigeration. Other electrical equipment for the dairy The barn cleaner and silo unloader The electric fence. The electric hotbed. Sweet-potato curing and storage. Home and farm freezers. Laundry and cleaning equipment. Kitchen and household equipment. Appendix. Index.

Note (4793) The primary purpose of this book is to serve as text in organized agricultural courses, especially vocational courses in high schools. However it is useful also for home study by farmers and others who need an elementary practical discussion of electricity and electrical appliances on the farm. In this edition the work is about seventy pages longer Among the new material are the discussions of home freezers, barn cleaners, silo unloaders, and the use of electricity in sweet-potato curing and storage.

SMITH, HARRIS PEARSON

Farm machinery and equipment. Third edition. New York McGraw Hill Book Company Inc. 1948 520 p illus. 24 cm. (McGraw Hill publications in agricultural engineering, Quincy C Ayers consulting editor) $5 00 2383

Contents (abridged) Part I, Importance of farm machinery to agriculture Part II, Principles of farm machinery Materials of construction. Transmission of power and elements of machines. Selection of farm machinery Part III, Soil-preparation machinery: Moldboard- and disk-plow bottoms. Plow accessories. Rotary plows. Plow designs. Plow hitches, troubles, laying out fields for plowing, duty depth, life, care, and cost of plowing. Part IV Seedbed preparation machinery Part Seeding machinery Row-crop planters. Seeding machinery for small grains and grasses. Part VI, Cultivating machinery Part VII, Dusting and spraying machinery Part VIII, Harvesting machinery Part IX, Seed-preparation machinery Threshers and combines. Corn shellers and husker-shredders Part X, Feed-preparation machinery Feed grinders. Silage cutters and harvesters. Part XI, Fertilizing machinery Part XII, Transportation equipment. Part XIII, Cleaning and grading machinery Part XIV Soil and water-conservation machinery Part XV Laborsaving equipment: Elevators, power loaders, and post-hole diggers. Part XVI, Pasture machinery: Brush removal and the application of fertilizer and lime. Part XVII, Economics of farm machinery Index.

Note (4794) A comprehensive textbook used in agricultural college classes and also as manual of information for farm equipment salesmen and dealers, agricultural extension workers, and farmers. It covers the more important types of machines used in general farming in the United States The rapid increase in the mechanization of American agriculture during World War II and the development of the many new machines have required very extensive revision of the work in the present edition. It now covers the older standard machines which are still in use, and also newly developed ones such as flame weeders There are now 788 figures and most of these are either pictures of complete machines or drawings of details of mechanisms. Specialized machinery such as fruit cleaners, are not covered so thoroughly as those of more general application, such as cultivators.

TURNER ARTHUR WILLIAM AND ELMER J JOHNSON

Machines for the farm, ranch, and plantation. New York McGraw Hill Book Company Inc., 1948 793 p. illus. 24 cm. $6.00. 2384

Contents (abridged) Part I, Seedbed-preparation machines. Part II Crop-planting machines. Part III, Crop-tillage machines. Part IV Harvest and harvest-handling machines. Part Mechanical power and transportation machines. Part VI, General service machines and barn and product equipment. List of visual aids. Index.

Note: A comprehensive guide to the selection, operation, care, general maintenance, and storage of agricultural machinery. It will be of practical value to agricultural students, farm machinery dealers, and farmers. The more common types of machines, such as plows, drills, harvesters, and tractors, are discussed in detail, but attention is also given to less-well-known machines such as hemp cutters, twine-less balers, and transplanters. Numerous illustrations depicting practical operations in the use and repair of specific machines are included.

WOOLEY JOHN COCHRAN

Farm buildings. Second edition. New York McGraw Hill Book Company, Inc., 1946 354 p illus. 22 cm. (McGraw-Hill publications in agricultural engineering Quincy C. Ayres consulting editor) $4 00 2385

Contents (abridged) Part I, General The development of buildings in America. Fitting buildings to the farm. Estimating the cost of new buildings. Appraisal of existing buildings. The optimum investment in buildings. Field and farmstead planning. Fences and gates. Part II, Livestock and poultry buildings Planning buildings for the dairy enterprise. Types of dairy barns. Buildings for the poultry enterprise. Buildings for the hog enterprise. Beef cattle and sheep. Part III, Air-conditioning farm buildings. Part IV Building materials: Wood, Concrete, Cobblestone, concrete, and clay products. Siding, roofing, and insulation. Part Structural design Care, repair, and remodeling. Barn frames. Gable roof framing. The hip roof. Part VI, Buildings for storage Farm-machinery storage buildings. The silo. Apple and potato storage. Part VII, The farm home Design and construction of the farm home. Water supply and sewage disposal for the farm home. Part VIII, Drafting. Appendix. List of visual aids. Index.

Note: (4787) Organized and used as an agricultural college text book, this work is also an excellent handbook for anyone desiring practical information on the subject. Emphasis is placed on efficient and economical construction. There are approximately 700 illustrations. Many of these show floorplans or construction details. However some topics, for example the farm home, are treated so briefly that the book must be supplemented by other material for practical use. The author is Professor of Agricultural Engineering at the University of Missouri.

AGRICULTURAL CHEMISTRY

ANDERSON JOHN ANSEL, editor

Enzymes and their role in wheat technology New York Interscience Publishers Inc., 1946 371 p illus. 23 cm. (American Association of Cereal Chemists. Monograph series. Vol. I) $4.50 2386

Contents: The general chemistry of enzymes, by W. M. Sandstrom. Amylases, by Mary L. Caldwell and Mildred Adams. Applications of the amylases in milling and baking technology by Eric Kneen and R. M. Sandstedt. Esterases, by Herbert E. Longenecker Esterases in relation to milling and baking, by Betty Sullivan. Oxidizing enzyme systems, by E. S. Guzman Barron. Oxidizing enzyme systems of wheat and flour by Betty Sullivan. Proteases, by A. K. Balls and Marian W. Kies. Role of proteases in baking, by F. C. Hildebrand. The mechanism of alcoholic fermentation, by C. H. Werkman. Yeast fermentation, by Lawrence Atkin, Alfred S. Schultz, and C. N. Frey Author index Subject index

Note: The initial volume in series of monographs projected by the American Association of Cereal Chemists Except for the generalized discussion of the first paper only those particular enzymes which are of interest to cereal chemists have been treated. Of the two papers devoted to each class of enzyme, the first reviews present knowledge of both the animal- and plant-derived enzymes, while the second discusses the role of that enzyme in wheat processing and utilization. The papers are monographic in style and organization and are accompanied by long bibliographies of the related literature. The fact that the titles of the journal articles are included as part of the bibliographical information deserves special mention.

ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS

Official and tentative methods of analysis of the Association of Official Agricultural Chemists editorial board, Henry A. Lepper Chairman. Sixth edition. Washington, D C Association of Official Agricultural Chemists 1945 932 p illus 24 cm. U.S $6.25 foreign countries $6 75 2387

Contents: Definitions of terms. Soils. Fertilizers. Agricultural liming materials. Cosmetics. Enzymes. Insecticides and fungicides. Caustic poisons. Naval stores. Gelatin, dessert preparations, and mixes. Leathers. Tanning materials. Plants. Beverages (non-alcoholic) and concentrates. Malt beverages, sirups and extracts, and brewing materials. Wines. Distilled liquors. Baking powders and baking chemicals. Coffee and tea. Cacao bean and its products. Cereal foods. Coloring matters. Dairy products. Eggs and egg products. Fish and other marine products. Flavoring extracts. Fruits and fruit products. Grain and stock feeds. Meat and meat products. Metals, other elements and residues in foods. Nuts and nut products. Oils, fats, and waxes. Preservatives and artificial sweeteners. Spices and other condiments. Sugars and sugar products. Processed vegetable products. Vitamins. Waters, brine, and salt. Radioactivity Drugs. Microbiological methods. Microchemical methods. Extraneous materials in foods and drugs Standard solutions. Reference tables. Appendix. General index.

Note (4799) Each succeeding edition of this standard manual for the analytical chemist exhibits constant growth both in size and diversity of subject matter The 175 additional pages of this edition are accounted for by the revised methods which have been incorporated into the original material, and the inclusion of new chapters on cosmetics, enzymes, gelatin and dessert preparations, and extraneous materials in foods and drugs. The chapter on paints and varnishes of the earlier edition has been omitted. The appendix includes eighty pages of reference tables, and definitions of terms relating to fertilizers and liming materials.

AVERY GEORGE SHERMAN JR., AND OTHERS

Hormones and horticulture the use of special chemicals in the control of plant growth, by George S Avery Jr and Elizabeth Bindloss Johnson, with the collaboration of Ruth M. Addoms, and Betty F Thomson. New York McGraw Hill Book Company Inc., 1947 326 p illus. 23 cm. (McGraw Hill publications in the botanical sciences, Edmund W Sinnott, consulting editor) $4.50 2388

Contents: Introduction. Hormones and the rooting of cuttings. Blossom-thinning sprays in the control of fruit production. Hormone control of the preharvest drop of fruits. Hormones as aids to fruit set and to modern fruit production. Hormone treatment of seeds. Hormones and vitamins in relation to miscellaneous growth phenomena. Hormones and weed control. Breaking dormancy with chemicals. Hormones in prolonging or inducing dormancy Chemical production of new varieties. Name index. Subject index.

Note. A much-needed survey of the history and current knowledge of plant hormones and other chemicals that affect the growth of plants is provided by this work. The discussions are based on comprehensive survey of the literature and important statements are key-numbered to the extensive bibliographies. There are many illustrations that show mainly techniques and the results of controlled experiments. Although there is much in the book to interest the amateur experimenter and horticulturist, it is written on professional level and should be useful as practical manual and guide to the literature. The senior author is Director of the Brooklyn Botanic Garden.

LAURITZEN JOHN IRVIN AND OTHERS

Inversion of sucrose and other physiological changes in harvested sugarcane in Louisiana, by John I. Lauritzen, R. T Balch, and Charles A. Fort. Washington, D C. Government Printing Office, 1948 65 p illus. 23 cm. (United States. Department of Agriculture. Technical bulletin no 939) Paper $0.25 2389

Contents: Summary. Review of literature. Storage conditions. Varieties. Sampling. Methods of analysis: Hand-mill juice. Cane

basis: Preparation. Analysis. Determination of soluble dry solids and true purity. Experimental data: Temperature and high moisture conditions. Rooting and sprouting. Inversion of sucrose and other changes. Temperature and high and low moisture conditions. Temperature and inversion at common saturation deficit at different temperatures. Some factors affecting the loss of moisture. Relation of humidity and moisture loss to inversion of sucrose. Effect of maturity on inversion of sucrose. Discussion and conclusions. Literature cited.

Note A report of the findings of a series of investigations carried out between 1932 and 1944 at the United States Sugar Plant Field Station, Houma, Louisiana.

McMillen Wheeler

New riches from the soil the progress of chemurgy New York D Van Nostrand Company Inc., 1946 397 p 21 cm. $3.50 2390

Contents: Part I, The background. How chemurgy started. Chemurgy is organized. Part II, The cigarette paper story. Corn, crop with new ideas. Corncobs and oat hulls. Soybeans, a new crop that has arrived. New crops for wheat and cotton lands. A farmer works at chemurgy. Chemurgy in the Everglades. Oils from the sea. Many a mickle makes a muckle. The empire of fibers. Wealth from the woods. Animal chemurgy. Fruits from new branches. The subject of alcohol. American farm rubber. Part III, Government takes a hand. Chemurgy reaches the grassroots. How the Chemurgic Council works. What makes it pay? The economics of chemurgy. A force for peace. Index.

Note Rubber from dandelions, glue and plastics from soybeans, alcohol from trees—farm products for industry rather than the food market—this is chemurgy. This narrative-styled work provides the interested reader with an introduction to the history, practical developments, and sociological import of chemurgy. The author is editor-in-chief of *The Farm Journal* and president of the National Farm Chemurgic Council.

Mitchell, John William and Paul C Marth

Growth regulators for garden, field, and orchard. Chicago The University of Chicago Press 1947 129 p illus. (part col d) 22 cm. $2.50 2391

Contents Introduction. Weed control. Vegetative propagation and transplanting. Prevention of growth in stored plant material. Preventing fruit-drop. Ripening fruit. Improving fruit-set and the production of seedless fruit. Other plant responses to growth-regulating substances. Key to abbreviations of firm names used in lists of commercial preparations. Index.

Note The present volume has been written primarily for the layman. It provides concise, non-technical information for amateur gardeners, farmers, and homeowners. For the convenience of such readers, trade names under which the various hormones are marketed in the United States are listed, together with the names of the manufacturers. Among the practical uses described of these chemicals are improving the keeping qualities of stored potatoes, killing weeds without injuring the grass in lawns, rooting plant cuttings, making female holly plants produce berries without the aid of pollen, and keeping apples from dropping until fully ripened.

Willaman John James and Roderick K. Eskew

Preparation and use of leaf meals from vegetable wastes. Washington, D C Government Printing Office 1948 102 p illus 23 cm. (United States Department of Agriculture. Technical bulletin no 958) Paper $0.35 2392

Contents Introduction. Availability of vegetable wastes. Chemical composition of vegetable wastes and vegetable leaf meals. Preparation of vegetable leaf meals. Use of vegetable leaf meals in poultry feeds. Carotene concentrates and other lipid products in vegetable leaf meals. Summary. Literature cited.

Note Taken up in this pamphlet are the advantages and methods of using waste parts of vegetables as sources of vitamins in the feeding of poultry as determined from experimental studies.

ECONOMIC BOTANY

Åberg, Ewert, and G A. Wiebe

Classification of barley varieties grown in the United States and Canada in 1945 Washington D C Government Printing Office, 1946 190 p illus. 23 cm (United States. Department of Agriculture. Technical bulletin no 907) Paper, $0 50 2393

Contents: Need for classification. Previous systems of classification. The genus *Hordeum*: its sections and species. Cultivated barleys of the United States and Canada. Manchuria-O. A. C. 21-Oderbrucker group. Coast group. Tennessee Winter group. Other varieties. Classification technique. The barley plant. Taxonomic characters. Identification of varieties from threshed grain. Classification keys: Winter barley. Spring barley. Spring barley grown in Middle Western and Eastern states and provinces. Spring barley grown in the intermountain area and on the Pacific Coast. Important commercial varieties of spring barley. Description, history, and distribution of varieties. Literature cited. Index to variety and synonym names, type, and principal use. Character index.

Note. The purpose of this illustrated bulletin is to provide descriptions of the varieties of barley grown in the United States and Canada and a classification key by which they can be identified. The publication is intended for use primarily by agronomists, teachers, students, extension workers, maltsters, tradesmen, and farmers. A related publication by the same authors is *Taxonomic value of characters in cultivated barley* 1946 (Technical bulletin no. 942) paper $0 15

Archer, William Andrew

Collecting data and specimens for study of economic plants Washington D C. Government Printing Office 1945 52 p illus. 23 cm. (United States. Department of Agriculture. Miscellaneous publication no. 568) Paper $0 15 2394

Contents Introduction. Remarks on foreign travel. Photography. How to address shipments for entry into the United States. General information needed for specimens. How to keep field notes. Sample extracts from a permanent field notebook. Pressed plant specimens. Plant products for analysis. Propagation material. Diseased plant specimens. Insect-pest specimens.

Note Because of the importance of careful preparation of specimens by persons engaged in botanical field work, especially in foreign countries, and of complete and accurate data accompanying them, this pamphlet has been published to present proper methods of gathering, preparing, and shipping such specimens. Directions are included for pressing specimens of both agricultural crops and wild plant products. Preparation is also covered of material for study of plant diseases and insect pests, plant products, and seeds or other material for propagation. The value of good photographs and full reports is emphasized.

Artschwager, Ernst

Anatomy and morphology of the vegetative organs of *Sorghum vulgare* Washington, D C Government Printing Office, 1948 55 p. illus. 23 cm. (United States. Department of Agriculture. Technical bulletin no 957) Paper $0 20 2395

Contents Previous investigations. Materials and methods. Gross morphology. Morphology of the stalk. Morphology of the leaf. Anatomy of the stem. Anatomy of the leaf. Anatomy of the root. Literature cited.

Note In this bulletin the morphology and anatomy of the sorghum plant are treated in detail because of the value to the geneticist and the pathologist of a knowledge of the structure of the plant organs. One hundred fifty-two different varieties of sorghums grown at the experimental farm at State College, New Mexico, furnished the material for the study and the illustrations which it contains.

CRABB, A. RICHARD
The hybrid-corn makers prophets of plenty New Brunswick N J Rutgers University Press, 1947 331 p illus. 22 cm. $3.00 2396

Contents: Eternal servant. Dawn on the prairie. Edward Murray East. Land of the sleeping giant. Unexpected help. New heads on the corn. Yankee from Kansas. An idea moves west. New horizons. Henry Agard Wallace. New victory at Tippecanoe. Successful mission. New empire—in the north. The story of De Kalb. Fame comes to El Paso. Builders all. New temple on old foundations. Distinguished service. Just the beginning. Index.

Note An extremely detailed yet readable account of how hybrid corn was developed in the United States during the past fifty years. The book is largely descriptive of the experimental work and accomplishments of individuals, but taken as a whole these accounts constitute an important chapter in the agricultural history of this country Because the production of hybrid corn is a comparatively recent accomplishment, the author was able to obtain the major part of his information personally from the pioneer workers in this field.

DUKE UNIVERSITY MARINE STATION
Utilization of seaweeds from the South Atlantic and Gulf coasts for agar and its decomposition by bacteria. Durham, N C. Duke University Press 1946 80 p illus. 27 cm. (Duke University Marine Station. Bulletin no 3) Paper $2 00 2397

Contents General summary Introduction to agar and its uses, by H. J. Humm and F A. Wolf. Influence of environmental factors upon the growth of *Gracilaria confervoides*, by N R. Causey and others. *Gracilaria confervoides* as a source of agar, by W S. DeLoach and others. Preparation of an agar-like gel from *Hypnea musciformis*, by W S. DeLoach and others. Suitability of extractive from *Hypnea musciformis* for the cultivation of microorganisms, by F A. R. Mixon. Marine agar-digesting bacteria of the South Atlantic coast, by H. J Humm. Three new agar-digesting actinomycetes, by J. H. Humm and K. S. Shepard.

Note Prior to the outbreak of World War II, about ninety percent of the agar used in the United States was obtained from Japan. When hostilities began, the utilization of domestic seaweeds was attempted as a substitute source of the gel. The present bulletin describes these efforts and appraises their results. The work was done under a contract with the Office of Production Research and Development.

FIFIELD, COLBURN CHARLES AND OTHERS
Quality characteristics of wheat varieties grown in the western United States, by C. C. Fifield, C. E Bode, H. C Fellows Ray Weaver J F Hayes Alfred Christie, B E. Rothgeb, and Elwood Hoffecker Washington, D C. Government Printing Office, 1945 35 p. illus. 23 cm. (United States Department of Agriculture. Technical bulletin no 887) Paper $0 10 2398

Contents: Introduction. Materials. Methods. Experimental results: Agreement between field and nursery and irrigated and nonirrigated tests. Comparison of varieties of winter wheat. Comparison of varieties of spring wheat. Varieties in California. Commercial utilization and experimental characterization of varieties. Interrelations of quality characteristics Protein content and yield of grain. Protein content of grain and of flour Carotenoid content of grain and of flour Relations involving loaf-loaf volume. Bread-loaf volume, cooky factor, and cake grain and texture. Relations involving cooky factor Relations involving cake grain-and texture score Cake grain and texture and cooky factor Literature cited.

Note: Printed in this pamphlet are data relating to the quality characteristics of 44 varieties of wheat grown in experimental plot and nursery trials in the western United States, mostly without but in some cases with irrigation. Included were the important commercial and a number of new varieties. The study was undertaken cooperatively by western agricultural experiment stations and the United States Department of Agriculture. The publication should assist millers, bakers, and the grain trade in properly utilizing the wheat produced in the western states, and should guide agronomists in recommending varieties to be grown under similar environmental conditions.

FOGG, JOHN MILTON JR.
Weeds of lawn and garden a handbook for eastern temperate North America. Illustrations by Léonie Hagerty Philadelphia University of Pennsylvania Press 1945 215 p. 21 cm. $2.50 2399

Contents (abridged) Introduction Why some plants are weeds. The geographic origin of weeds. The naturalization of weeds. Chemical controls. Weeds as soil indicators. Illustrations and descriptions of weeds. Glossary Bibliography Index.

Note. An unpretentious but useful guide which is suitable chiefly for amateur gardeners. It contains clear drawings and descriptions of 173 weeds which are common to the region mentioned in the title. When the immature form of the weed differs considerably from the mature plant the former is also shown in order to aid in the early eradication of the weed. Methods of control are described very briefly—chemical control, for example, being covered in somewhat less than three pages, and other methods being covered in a line or two in the description of the weed itself.

GILMAN, JOSEPH CHARLES
A manual of soil fungi. Ames, Iowa The Iowa State College Press 1945 392 p illus 23 cm. $5.00 2400

Contents. Phycomycetes. Ascomycetes. Fungi imperfecti. Mycelia sterilia.

Note: A reference book designed to assist research workers in the fields of biology and agriculture in the identification of fungi which have been isolated from the soil. Mushrooms, plant pathogens not isolated directly from the soil, and forms from leaf mold and decayed wood not fully incorporated in the soil are not included. The book is based on a survey of the literature of the subject and provides descriptions of the growing characteristics of those species which have been cultivated artificially Keys to classes, orders, species, and families facilitate the problem of identification. A two-page bibliography and a glossary are included.

POOL, RAYMOND JOHN
Marching with the grasses. Lincoln Nebr University of Nebraska Press, 1948 210 p illus 24 cm. $3.50 2401

Contents: The kindly traits of the grasses. The principal grasslands of the world. Wheat. Rice. Indian corn. Barley Oats. Rye. The sorghums and millets. Sugar cane. Grasses of the range, pasture, and meadow Grasses in relation to soil conservation. Grasses for lawns, parks, and playing fields. Miscellaneous interests in grasses. Bibliography Index.

Note A concise work intended principally as supplemental reading for botany classes—especially those in agricultural colleges, but useful also as a general reference book. The author discusses the history evolution, world distribution, and social and economic significance of both the wild and cultivated grasses. Most of the excellent drawings are taken from works of A. S. Hitchcock, such as *A textbook of grasses*, New York The Macmillan Company 1914

POPE, OTIS ALSTON AND J O WARE
Effect of variety location, and season on oil, protein, and fuzz of cottonseed and on fiber properties of lint. Washington, D C. Government Printing Office, 1945 41 p. illus 23 cm. (United States Department of Agriculture. Technical bulletin no 903) Paper $0 10 2402

Contents: Need for cotton variety studies. Results of previous investigations. Experimental procedure. Experimental results: Percentage of oil. Percentage of protein. Percentage of fuzz. Relation of oil to protein content. Laboratory studies of fiber properties Upper quartile length Mean length. Coefficient of variability for length. Analyses of variance. Chandler strength. Weight per inch. Coefficient of variability for fineness. Analysis of variance. Fiber

maturity Percentage of immature fibers. Coefficient of variability for maturity Analysis of variance. Literature cited.

Note Studies were carried out on samples of 16 varieties of cotton grown in 4 replicates at 11 to 14 locations in 1935 1936 1937 The data secured and results obtained are given in this bulletin. The design of the study provided an opportunity for testing the relative effect of variety location, and season and the interactions of these main effects on each of the variables, the oil and the protein content of cottonseed, and the amount of fuzz on the seed.

UNITED STATES DEPARTMENT OF AGRICULTURE

Grass. Washington D C. Government Printing Office, 1948 892 p illus. 24 cm. (United States. Department of Agriculture. Yearbook of agriculture 1948) $2 00 2403

Contents (abridged) Grass in the nation's life. Soil, grass, conservation Environment of natural grassland. How soils develop under grass. The tools of flood control. Grasses that fix sand dunes Forage for livestock Soils, crops, minerals, animals. Grassland crops as feed for horses. The vital 10 percent for poultry Sheep, goats, and grasslands. Use of forage in feeding hogs. Grass for the production of beef. Dairy cattle must have good forage. The use and value of pastures: The management of grazing. Management of irrigated pastures Grass in natural forested areas. Soil management on farm pastures. Storage of forage Principles of making hay The costs and ways of making hay Ensiling hay and pasture crops. Grass and rotations: Grass and the yields of cash crops. Fertilizers for grass in rotations The range, a major resource How range forage grows. The major range types. Planning range conservation. Spacing water holes to save grass. Wildlife a resource of the range. How to control noxious plants. Enemies of grass: Some diseases of forage grasses Some diseases of forage legumes. Some of the insects Grass for happier living: Sod is ideal for playing fields. Pointers on making good lawns Safety and beauty for highways. Airfields and flight strips The search for better grass: The breeder's ways and means. Wanted—a paragon for the range. Immigrants to our grasslands. Domesticated grasses in conservation. Improved varieties of alfalfa. Clovers that make a crop. The other pasture legumes. Developing grasses for special uses Grass in the ten regions The Northeastern states. Corn Belt and Lake states. Grasslands in the South The Southern Great Plains. The Mountain region. The Pacific Coast states. Grasslands in Alaska Grasslands in Hawaii Grasslands in Puerto Rico Grass in charts and tables. Lists of plant names. Scientific names Common names For further reference. Index.

Note An exceptionally complete treatise on grass in all its varieties, uses, and localities. It was written by staff specialists of the United States Department of Agriculture and grasses grown in the United States are emphasized The book is divided into four parts, the first an examination of grass as it applies to people anywhere, with emphasis on livestock, soils and conservation, the second, a series of studies of grass in the regions of the United States, with emphasis on varieties and uses the third, a handbook describing systematically the most important and most useful grasses, legumes, and associated plants the last, a section of charts and tables, including recommended hay and pasture mixtures and quantity of seed per acre for various states, followed by a bibliography of 24 pages and an index In addition, there are included two extensive sections of photographic illustrations, one of the sections in full color

WILSON CHARLES MORROW editor

New crops for the new world. New York The Macmillan Company 1945 295 p illus. 24 cm. $4.00 2404

Contents The undeveloped field of tropical fruits, by Wilson Popenoe Maize in the new world, by Edgar Anderson. The beginning of livestock breeds, by Albert O Rhoad. Palm oils and waxes, by Miriam L. Bomhard. Rubber returns to Latin America, by Walter N Bangham Cinchona, the fever tree, by Wilson Popenoe Drug and medicinal crops, by E. C. Higbee. Biological control of insect pests, by C P Clausen Forest resources of tropical America, by Arthur Bevan. Silks from South America, by George E. Adamson. Bamboos in the new world, by Atherton Lee. Peppers for the Americas, by A T Erwin Flowers for the new world, by B. Y Morrison. Cane sugar production, by P Honig Introducing American plants to the Americas, by B. Y Morrison. Launching new crops for the Americas, by V C Dunlap.

Note A survey designed for general reading, of recent efforts to introduce new crops and to re-introduce old ones as commercial bases, together with expert appraisals of opportunities for further investigation and development. Most of the material is concerned with the Latin American countries, especially their tropical and sub-tropical regions. Each chapter is written by a specialist, but the book is designed for non-specialists and general readers. There is more emphasis on the historical and economic than on the botanical and genetic aspects of the crop plants. The activities of both commercial firms and government agencies are described, and the advantage to the United States of the cultivation in the Americas of vital crops such as rubber is pointed out.

PLANT DISEASES

CHESTER, KENNETH STARR

The nature and prevention of the cereal rusts as exemplified in the leaf rust of wheat. Waltham Mass. Chronica Botanica Co., 1946 269 p illus 27 cm. (Annales cryptogamici et phytopathologici. Vol. IV) $5.00 2405

Contents (abridged) Introduction names and history of the disease. Origin, distribution, and economic importance. Effect of the rust on the host plant and its yields. Suscepts Symptomatology. Etiology Physiologic specialization. Factors affecting rust survival and development. Rust dissemination; annual cycles epiphytotics. Natural, regulatory and cultural rust control. Rust control by the use of fungicides. Control by rust resistance. Bibliography Author index. General index.

Note. An inclusive survey of the knowledge of leaf rusts of wheat, viewed as an example of the whole cereal rust problem. It is based on a thorough survey of the international literature, and references are incorporated in the text to the citations of sources in the bibliography The author's underlying theme is that the cereal rusts are kept under control and the world is saved from starvation only by the vigilance of plant breeders and specialists in plant diseases who work constantly on the problem throughout the world. His statistics, analyses, and descriptions are drawn from so many countries that every phase of the problem is shown to be international. The two final chapters are devoted to the most important technique yet developed—that of breeding varieties of wheat which are resistant to rust; and it is shown that even this technique must be constantly pursued in order to keep pace with the variations in rusts which adapt them to propagation on the new resistant varieties. The bibliography is nineteen pages long

CHESTER KENNETH STARR

Nature and prevention of plant diseases. Second edition Philadelphia The Blakiston Company 1947 525 p illus 23 cm. (Blakiston books on agriculture) $5 00 2406

Contents Significance of plant disease in agriculture. Types of plant disease fungi. Diseases caused by basidiomycetes: Rusts, Smuts Fleshy fungi, mycorrhizae. Diseases caused by ascomycetes. Diseases caused by imperfect fungi. Diseases caused by phycomycetes and related fungi. Damping-off and related troubles. Diseases caused by bacteria. Diseases caused by viruses. Diseases caused by parasitic seed plants and algae epiphytes. Diseases caused by nematodes or eelworms. Physiogenic diseases. The methods of studying plant diseases Environment and parasitic disease. Ecology and epiphytology of disease Principles and procedures in the control of plant diseases control of plant diseases by regulation. Control of plant disease by inducing resistance. Control of plant disease by cultural methods. Glossary Index.

Note (4130) This work, prepared by a member of the faculty of Oklahoma Agricultural and Mechanical College, covers the causes and prevention of plant diseases in a manner suited to beginning courses in colleges of agriculture. It discusses the leading diseases of the major crops grown extensively in the United States, emphasizes the recognition of these diseases, and indicates in detail the latest generally approved methods of their control. In the new edition there has been some rearrangement of the chapters and new material has been added on several diseases including apple bitter rot, sugar cane red rot, cabbage yellows, early blight of potato and tomato, aster yellows, sugar beet curly top, phloem necrosis of elm, and golden nematode of potato. The references lists of pertinent literature have been revised to include recent material.

COOK MELVILLE THURSTON

Viruses and virus diseases of plants. Minneapolis Minn Burgess Publishing Company 1947 244 p. illus 28 cm. $4 00. 2407

Contents: Introduction. Theories as to causes of virus diseases. Nature and properties of plant viruses. Reactions of host plants to viruses. Transmission of viruses. Control of virus diseases of plants. Appendix: Chronology of the most important discoveries and events in the progress of our knowledge of the virus diseases of plants. Bibliography Authors' index. General index.

Note Intended for advanced students in botany and plant pathology this comprehensive work is based on survey of the literature. It summarizes knowledge of the subject by describing all important discoveries, researches, experiments, and results, with dates, from 1576 to the present day The bibliography covers 38 pages. An earlier edition, entitled *Plant viruses and plant diseases*, was published in mimeographed form by the Louisiana State University

DICKSON JAMES GEERE

Diseases of field crops. New York Mc Graw Hill Book Company Inc., 1947 429 p illus. 23 cm. (McGraw Hill publications in the agricultural sciences, Leon J Cole, consulting editor) $4.50 2408

Contents: Section I, General introduction: Introduction. Physiological anatomy of plant groups in relation to disease. Section Diseases of cereals and grasses: Barley diseases. Corn diseases. Millet diseases. Oat diseases. Rice diseases. Rye diseases. Sorghum, sudan grass, and Johnson grass diseases. Sugar cane diseases. Wheat diseases. Grass diseases. Section III, Diseases of legumes: Alfalfa and sweetclover diseases. Clover diseases. Soybean diseases. Section IV Diseases of fiber and other field crops: Cotton diseases. Flax diseases. Tobacco diseases. Appendices. Index.

Note A concise manual that is used both as text and as reference book. Essentially it is digest of the international literature that still has scientific or horticultural significance. Each chapter is accompanied by bibliography of considerable length to which statements in the text of the chapter are keyed. There are about 100 illustrations, most of which are reproductions of photographs of diseased plants. The control of plant diseases is not covered

DODGE BERNARD OGILVIE, AND HAROLD W RICKETT

Diseases and pests of ornamental plants. Revised edition. New York The Ronald Press Company 1948 638 p illus. 24 cm. $6.00 2409

Contents (abridged) Part I, Diseases and pests in general Plant diseases—plant diseases classified by symptoms—plant diseases classified by causes. Bacteria and fungi. Insects and other animal pests. Control—culture—sanitation—resistance—poisons—heat—biologic control. Part II, Diseases and pests of particular hosts. Index.

Note. (4431) A relatively comprehensive manual. It is intended for use by home gardeners but is full enough to be useful in professional horticulture. The greater portion of the book is devoted to listing of plant diseases and pests of specific hosts, given under the botanical names of the plant hosts, which are arranged in alphabetical order The symptoms and appearance of the disease are indicated along with the scientific and common name of the disease and methods of control are outlined. The first four chapters present general outline of the causes, effects, and means of preventing or overcoming plant diseases. In this edition the work has been revised to include many new tested fungicides and insecticides introduced during the past five years.

HORSFALL, JAMES GORDON

Fungicides and their action. Waltham, Mass Published by the Chronica Botanica Company 1945 239 p illus 24 cm. (Annales cryptogamici et phytopathologici, edited by Frans Verdoorn. Vol. II) $5 00 2410

Contents: Foreword, by David Fairchild. Historical introduction. Some general concepts. Laboratory assay Some problems of data treatment. Principles of chemical protection. Deposition. Coverage of single surfaces Coverage of multiple surfaces. Tenacity Artificial immunization and chemotherapy Action of copper. Action of sulfur. Action of organic nitrogen compounds. Action of other organic compounds. Antagonism and synergism. Phytotoxicity Bibliography. General index. Author index.

Note Stressing the underlying theory upon which is based, and by which may be improved, the combating of fungi on plants, this volume considers the types of fungicidal action, the materials used, and the most effective techniques. While the major portion of the illustrative examples was taken from the field of plant pathology there is also certain amount of reference to fungicides in the fields of wood and fabric preservation, human pathology bacteriology and entomology Materials and techniques are discussed in the light of the chemistry and physiology of toxic action and of the mechanics of application. The volume makes frequent direct reference to the published writings of other investigators and contains an extensive bibliography covering 23 pages.

LANGFORD, MICHAEL HENDRIX

South American leaf blight of hevea rubbertrees. Washington D C. Government Printing Office, 1945 31 p. illus. 23 cm. (United States Department of Agriculture. Technical bulletin no 882) Paper, $0 10 2411

Contents: Cooperative rubber-planting program. Blight-control program. Factors influencing disease development and severity: Host susceptibility The fungus. Environmental conditions. A system of classifying hevea clones for resistance. Other leaf spots associated with leaf blight. Resistance tests at Turrialba, Costa Rica. Clones recommended for field plantings Literature cited.

Note The fungus *Dothidella ulei* is the cause of South American leaf blight, the chief obstacle to the successful cultivation in tropical America of the Para rubbertree, the world' foremost source of rubber This bulletin reports the result of four-year study of the influence of environmental factors on leaf blight severity and gives the results of series of resistance tests on hevea plant material assembled from many parts of the world.

SUMMERS, EATON MELROY AND OTHERS

Mosaic of sugarcane in the United States, with special reference to strains of the virus by Eaton M Summers, E W Brandes and R. D Rands. Washington D C Government Printing Office, 1948 124 p illus. 23 cm. (United States Department of Agriculture. Technical bulletin no 955) Paper $0.35 2412

Contents: High lights of sugarcane mosaic and the current development of resistant varieties: Theories of causation. Proof of infectiousness. Need for practical control. Developing resistant, adapted varieties Geographic origin of epidemic. Need for continuous variety replacement. Host range of the sugarcane mosaic virus Sugarcane species and varieties Other grass hosts Epidemiology studies Local spread of mosaic in the field. Vectors. Strains of the mosaic virus Historical. Discovery of differential varieties. Comparative infection experiments. Summary of different symptoms produced on certain sugarcane varieties by seven strains of the mosaic virus. Key for identification of strains and substrains of the sugarcane mosaic virus differentiated in this study Regional and varietal survey Recovery from mosaic Importance of recovery Recovery among commercial varieties in Louisiana. Rebound of recovery Literature cited.

Note. Mosaic, typical virus disease of the leaf-mottling type, has been serious problem at one time or another in practically every country that produces sugarcane. It was major cause of the decline of the Louisiana sugar industry in 1920-26. The production of mosaic-resistant varieties of sugarcane is one of the main objectives in the cooperative varietal improvement program of the Division of Sugar Plant Investigations of the United States Department of Agriculture, the American Sugar Cane League, and the Louisiana Agricultural Experiment Station. This bulletin presents data from studies of strains of the mosaic virus and their effect on different varieties of sugarcane.

WEINDLING RICHARD

Bacterial blight of cotton under conditions of artificial inoculation. Washington, D C. Government Printing Office, 1948 59 p. illus. 23 cm. (United States. Department of Agri-

culture. Technical bulletin no 956) Paper $0.20 2413

Contents Infection and disease reaction of individual leaves: Materials and methods. Factors affecting infection of leaves. Factors affecting susceptibility. Discussion. Artificially induced epidemics in relation to varietal resistance and epidemiology. Methods. Greenhouse experiments. Field experiments. Miscellaneous studies: Moist ure relations in infection by *Xanthomonas malvacearum*. Vascular infection. Survival of *Xanthomonas malvacearum* in plant tissue. Natural spread of bacterial blight. Literature cited. Appendix.

Note The bacterial blight of cotton, caused by *Xanthomonas malvacearum* which results on the cotton plant in angular leaf spot, black arm, and bacterial boll rot, is a common disease in all cotton-producing countries and is the subject of the investigations reported in this pamphlet. Emphasis in the experiments, which were carried on mostly at Clemson, S. C., between 1942 and 1945 was placed on (1) the host-parasite relationships fundamental in epidemics of the disease, involving intensive studies on infection of individual leaves, and (2) methods for producing epidemics by artificial inoculation, including greenhouse and field experiments on the epidemiology of the disease. The statistical results of the researches are presented in twenty-five tables appearing in the appendix.

INSECT PESTS AND INSECTICIDES

AMERICAN MOSQUITO CONTROL ASSOCIATION

The use of aircraft in the control of mosquitoes Albany N Y American Mosquito Control Association 1948 46 p. 24 cm. (AMCA bulletin No 1) Paper $1.50 2414

Contents (abridged) Historical background. Types of aircraft and dispersal equipment. DDT formulations. Operational procedures. Situations in which aircraft are useful. Appraisal of results. Precautions to be taken against injurious effects. Public relations, legislation, liability and insurance. Bibliography and references. Appendices: Data on various types of equipment on airplanes. Equipment for dispersing insecticides from small aircraft. Specifications. Solvents for DDT. Sample record forms. Civil air regulations and list of regional offices. Contracts. Future research. Sources of equipment and supplies. Aircraft spraying and dusting service.

Note This pamphlet is intended to serve as a handbook of practical information for the guidance of organizations and individuals concerned with the large-scale control of mosquitoes. It outlines the various methods which have been developed for the distribution of insecticides from aircraft, and describes the specialized equipment which must be fitted to the airplanes and provides a wide variety of miscellaneous information useful in such programs.

BRUES CHARLES THOMAS

Insects & human welfare an account of the more important relations of insects to the health of man, to agriculture, and to forestry Revised edition. Cambridge, Mass. Harvard University Press 1947 154 p illus 22 cm. $2.50 2415

Contents Insects and the public health. Insects and the food supply. Forest insects. Household insects. The outlook for the future. Index.

Note In simple, mainly non-technical language the author of this book tells the layman about some of the more well-known insects, their life habits, geographic ranges, destructiveness as pests, roles as disease carriers, and the methods of controlling them. In this edition a number of changes have been made to cover new insecticides, new information on insects as disease carriers, and new insect pests.

DE ONG ELMER RALPH

Chemistry and uses of insecticides. New York Reinhold Publishing Corporation 1948 345 p illus 24 cm $6 00 2416

Contents Introduction. Arsenic and its compounds. Copper and its compounds. Sulfur and its compounds. Miscellaneous inorganic compounds. Mineral and other oils. Fumigants and fumigation. Plant derivatives. Synthetic organic compounds. Heat, cold and radiation as insecticides. Appendices: Dictionary of insecticides. Glossary. Legal requirements covering the manufacture and sale of insecticides. Official antidotes. ASTM standards. Conversion tables and equivalents; volume and linear. Miscellaneous data. List of United States patents. Author index. Subject index.

Note A broad treatment of the subject. In it are discussed most of the chemicals, including the older ones, which are still useful as insecticides. Specific data are given on chemical properties, history of use as an insecticide, uses, methods of application, and dangers. The work is written in the style of a monograph with important statements in the text keyed to bibliographies in which citations of the sources of the information are given. It will be useful chiefly as a reference book, and as an agricultural college textbook.

DETHIER, VINCENT GASTON

Chemical insect attractants and repellents. Philadelphia The Blakiston Company, 1947 289 p illus 23 cm. $5 00 2417

Contents Introduction. Nature of chemical attractants. Essential oils, resins, and related substances. Fermentation products (alcohols, acids, aldehydes, esters, carbinols). Protein and fat decomposition products (fatty acids, amines, ammonia, carbon dioxide). Olfactometers and threshold concentrations. Baits and traps. Repellents. Chemical basis of taste and olfaction. Evolution of feeding preferences. Author index. Subject index.

Note Despite the title, this book is not a manual of recipes for the manufacture of insect attractants and repellents nor a guide to the practical use of such substances. Instead it reviews what is known about the scientific bases, especially the physical and physiological factors, that underlie the effectiveness of such compounds. The results of experiments that have been reported are digested and references are made to the original publications. Experimental techniques and pertinent aspects of insect behavior are described. The author is Professor of Zoology and Entomology at Ohio State University

FREAR DONALD ELISHA HARDING

A catalogue of insecticides and fungicides compiled by Donald E H Frear, with a foreword by F F Lininger Waltham, Mass. Chronica Botanica Co , 1947–48 2 v 27 cm. (Annales cryptogamici et phytopathologici. Vol. 7–8) Paper $6 50 2418

Contents (abridged) Volume I, Chemical insecticides. Introduction. Arrangement of compounds, coding system. General. Organic compounds. Subclassification. Inorganic compounds. Specific instructions and conventions. Abbreviations, references, etc. Chemical insecticides. Condensation products—insecticides. Miscellaneous insecticides. References and author index. Numerical patent list. Volume II, Chemical fungicides and plant insecticides. Chemical fungicides. Condensation products. Plant product fungicides. Miscellaneous fungicides. Plant insecticides. Miscellaneous plant products. References and author index. Numerical patent list. Index of chemical compounds.

Note A valuable reference book for professional workers in chemistry plant pathology and economic entomology. It is one of the results of work done under Project 999 of the Pennsylvania Agricultural Experiment Station, which was set up during World War II to find new insecticides and fungicides. It was the belief of the leaders of this project that before any concerted effort could be made to search for new chemicals, previous work in the field should be surveyed completely. This catalogue, therefore, is the result of a comprehensive search of the published literature and of an appeal to workers in the field for unpublished data. Widely used compounds such as nicotine, lead arsenate, and sulfur are not included but for less commonly used compounds and compounds not yet introduced commercially the catalogue is practically complete up to January 1944. The main part of the catalogue is arranged by a coding system devised especially for the work. Here the compound is described in chemical terminology and its uses are indicated concisely. References are made then to the bibliography in which the source articles and patents are cited in full.

FREAR DONALD ELISHA HARDING

Chemistry of insecticides fungicides and herbicides Second edition New York D

Van Nostrand Company Inc., 1948 417 p il lus. 24 cm $6 00 2419

Contents: Introduction. Part I, Inorganic insecticides: The arsenicals. Lead arsenate. Fluorine compounds and miscellaneous inorganic insecticides. Part II, Synthetic organic insecticides: DDT *hexachlorocyclohexane and chlordane. Other synthetic organic insecticides. Fumigants.* Part III, Natural organic insecticides: Insecticides derived from plants—Nicotine. Pyrethrum. Rotenone and rotenoids. Miscellaneous insecticides derived from plants. The oils. Part IV Fungicides: Copper compounds. Sulfur and inorganic sulfur compounds. Mercury compounds and miscellaneous inorganic fungicides. Organic fungicides. Part Spray supplements and residue removal Wetting, spreading and emulsifying agents. Spray residue removal. Part VI, Herbicides. Part VII, Analytical methods: Macro methods. Micro methods.

Note: (4441) The development of new insecticides and the increased interest in their use which have occurred during the past few years provide ample reason for the revision of this text on insecticides, first published in 1941 This volume has retained the general purpose of the earlier edition, namely, to provide an outline of the origin, chemistry methods of preparation, uses, and analysis of insecticides and fungicides. Its scope has been broadened to include brief chapter on herbicides, and the emphasis is now placed on the chemical rather than biological aspects of the subject. New chapters on DDT and organic fungicides have been added, and other sections have been expanded to cover such compounds as methallyl chloride the nitroparaffins, ammonium polysulfide and phenazthiols. The extensive bibliographies given at the end of each chapter have been brought up to date.

Leary, James Cornelius, and others

DDT and the insect problem by James C. Leary, William I. Fishbein, and Lawrence C. Salter New York McGraw Hill Book Company Inc., 1946 176 p illus 21 cm. $2.50 2420

Contents: Introduction. Insects and insecticides Chemistry and pharmacology of DDT How to use DDT DDT at war. Man's health and comfort. Agriculture. Forest, shade, and fruit tree insects. Index.

Note. A summary of available information regarding the properties and uses of DDT written for the user and layman rather than for the chemist or scientist. For this reason the discussion of chemical properties has been relegated to five pages. The greater part of the book consists of practical suggestions for the utilization of DDT together with formulations which have proved effective in the control of insect pests. Continual emphasis is given to the fact that DDT is poison and should therefore be handled with the same care as other insecticides. Literature of the subject is referred to at the end of each chapter.

Mallis Arnold

Handbook of pest control the behavior life history and control of household pests. New York MacNair Dorland Company 1945 566 p illus. 23 cm. $6 00 2421

Contents. Rats and mice. Silverfish Springtails. Cockroaches. Crickets. Earwigs. Termites. Dry rot fungi. Wood-boring, book boring, and related beetles. Psocids. Bedbugs and other bugs Clothes moths. Hide and carpet beetles. Ants. Bees and wasps. Stored product pests. Spider or ptinid beetles Lice. Fleas. Flies and mosquitoes. Spiders. Mites. Ticks Miscellaneous household pests. Chemicals used in controlling household pests. Household fumigation. Addendum: Elementary facts concerning insects. Antidotes and emetics. Literature Index. Suppliers of new materials equipment for pest control.

Note: A comprehensive manual. It is intended chiefly for professional entomologists and pest control specialists, but it contains information that is valuable also to householders, warehousemen, and others. It describes the pests in detail and presents practical methods for their control Illustrations number 139 and the bibliography is extensive. When the manuscript was prepared in 1944 the DDT insecticides were just coming into wide-scale use; therefore the great amount of data on these insecticides that has been accumulated since 1944 has not been incorporated in the book.

Snyder, Thomas Elliott

Our enemy the termite. Revised edition. Ithaca, N Y Comstock Publishing Company Inc. 1948 257 p illus 24 cm. $3.50 2422

Contents Termites, what they are. Metamorphosis and description of the castes. The colonizing flight. Nests. The food of termites. Guests or inquilines in termite nests. The disturbance of *the balance of nature by man. Damage by termites. Biological control* of termites. Methods and tests. Artificial control of termites. Appendix: Specifications for remedying termite damage to buildings. Fundamentals of subterranean termite control adopted by National Pest Control Association. Provisions for city building codes for insuring protection against termites and decay Lists of living and fossil termites of the world. Identification keys. Glossary Index.

Note A well-written, non-technical account of termites and of methods of controlling termite damage to wooden buildings and their contents. It appears to have been written for the information of persons whose curiosity of the subject has been aroused either by actual experience with termite damage or by reading popular articles about termites. The information on prevention of termite damage and of repairing it after it has occurred is presented so as to be useful to property owners and to builders, architects, and other persons who may be called upon to advise property owners. Most of the book deals factually with the various kinds of termites and their life habits. There are more than eighty illustrations. In this edition there is fair number of revisions, particularly in relation to control of termite damage, and the keys to the genera have been added.

United States Bureau of Entomology and Plant Quarantine. Orlando Fla. Laboratory

DDT and other insecticides and repellents developed for the armed forces. Prepared by the Orlando Fla. Laboratory of the Bureau of Entomology and Plant Quarantine. Washington D C. Government Printing Office, 1946 71 p illus. 23 cm. (United States. Department of Agriculture. Miscellaneous publication no 606) Paper $0.20 2423

Contents: Introduction. Chemistry of DDT other insecticides, and insect repellents. DDT larvicides for the control of anophelines and other mosquitoes. DDT insecticides for the control of adult mosquitoes. Airplane application of DDT Insecticides for the control of miscellaneous insects. Control of human lice and scabies. Insect repellents. Protective measures against mites. The toxicity of DDT, solvents, emulsifiers, activators, and other adjuvants mentioned in this report.

Note. A manual on the preparation, use, and effectiveness of DDT and other insecticides developed during World War II, being the second revision of report originally issued in 1944 by the Bureau of Entomology and Plant Quarantine. Based upon thousands of materials tested and hundreds of formulations studied, the discussion is limited to those materials and methods that apply to practical control operations. It is intended primarily for members of the armed forces and public-health workers concerned with the control of insects and insect-borne diseases.

Weigel Charles Adolph and L. G Baumhofer

Handbook on insect enemies of flowers and shrubs Washington, D C. Government Printing Office, *1948 115* p illus. *23* cm (United States. Department of Agriculture. Miscellaneous publication no 626) Paper, $0.35 2424

Contents: How insects develop and feed. General plant pests. Insects attacking specific plants, arranged by plants. *Insecticides.* Table of measures. Where insecticides may be purchased. When and how to apply insecticides. Quantity of sprays or dust to apply Spraying and dusting equipment. Appendix (*DDT insecticides*) Index.

Note: Superseding Farmers' bulletin 1495, *Insect enemies of the flower garden,* this publication is concise useful handbook of information to enable the gardener to recognize the common insect and related pests of the flower garden and to apply the proper remedies.

WESTCOTT, CYNTHIA

The gardener's bug book 1 000 insect pests and their control. With 100 full-color illustrations by Eva Melady and 100 line drawings by Eva Melady & J E Edmonson. Edited by F F Rockwell. New York The American Garden Guild Inc., and Doubleday & Company Inc., 1946 590 p illus. (part col d) 24 cm. $4 95 2425

Contents: Editor's foreword. List of color plates. Introduction. How to use this book. Insects in the garden. Garden chemicals. Spraying, dusting, fumigation. Insects in order The bugs. Host plants and their pests. It's not so bad as it seems Bibliography List of experiment stations. Glossary Index.

Note. Although written for amateur gardeners, even gardeners whose activities do not extend beyond a few house-plants, this book is exceptionally complete and practical. Not all of the known insect pests are included but practically all of them which will be encountered by gardeners on the North American continent are described and one hundred of them are shown in full color. The others are portrayed in black and white drawings All of the practical control methods are described, including the new insecticides such as DDT The lists of host plants and their pests runs to more than one hundred pages and is one of the book's most useful features. Books included in the bibliography are described in short annotations.

ZIMMERMAN, OSWALD THEODORE, AND IRVIN LAVINE

DDT killer of killers Dover N H. Industrial Research Service, 1946 180 p. illus 19 cm. U.S $3.25 foreign countries, $3 60 2426

Contents: Man's mortal enemies DDT is born. Not too hot to handle. DDT formulations. Common insect enemies. Old mother nature The end of the story Appendix Instructions for the use of DDT in the control of the common insect pests that affect man and animals. Instructions for the use of DDT on vegetables, fruits, flowers, and shade and forest trees. Index.

Note: Information for the general public about DDT is the subject of this easily read book The authors start with a short account of the epidemics caused by insect-borne diseases. This is followed by discussions of the discovery and rediscovery of DDT its toxicity to insects and animals, the various insecticides made with DDT and how destructive insects are controlled by them. The appendix contains a recapitulation of instructions for using DDT compounds to control insect pests. The book is a strictly popular one, and is not intended for use in research.

FIELD AND VEGETABLE CROPS

AHLGREN GILBERT HAROLD AND OTHERS

Practical field crop production for the Northeast an elementary introduction to agronomy by Gilbert H. Ahlgren Robert S. Snell, John C Anderson and Milton A. Sprague. Van Wie Ingham, editor New Brunswick, N J Rutgers University Press, 1947 437 p illus 23 cm. $4 00 2427

Content (abridged) The plant and how it grows. Grasses and legumes. Seed and seed treatment. Soil improvement practices. Soil and water conservation practices. Corn production in the Northeast. Small-grain production The main hay crops Corn and hay-crop silage. The economy of pasture production. Extending the pasture season. White potatoes. Sweet potatoes Soybeans and field beans. Tobacco. Weed control. Appendices: Field crop varietal recommendations for the Northeast (by states) State experiment stations and federal research laboratories in the Northeast. Glossary Index.

Note. A textbook based on present agricultural conditions and practices in the American northeastern states and specifically intended for students in the high schools, vocational schools, and agricultural colleges of that area. Review questions, projects, and suggested additional readings for the student are included with each chapter. The authors are faculty members of the Agricultural College in Rutgers University

COMIN DONALD

Onion production. New York Orange Judd Publishing Company Inc., 1946 186 p. illus. 20 cm. $2 00 2428

Contents: Origin and development. The onion as a crop plant. Adaptation to climate and soil. Types and varieties for many uses. Growing early intermediate and late crops. Soils and their management. Planting and care of the crop. The specialized industry of onion seed and set production. Growing green onions for bunching. The most troublesome diseases and insects affecting the onion. Harvesting and storing the crop. Costs and returns in producing onions. The onion as food. References Index.

Note. A simple treatise that discusses all aspects of the commercial production of onions and the related crops of chives, shallots, leeks, and garlic. The volume is intended for farmers, especially truck gardeners. The author is Assistant Horticulturist, Ohio Agricultural Experiment Station, Wooster Ohio.

COX JOSEPH FRANK, AND LYMAN E. JACKSON

Crop management and soil conservation. Second edition New York John Wiley & Sons Inc., 1948 572 p illus. 21 cm. (The Wiley farm series A. K. Getman and E. R. Eastman, editors) $3.80 2429

Contents (abridged) Part I, Balancing crop production and maintaining fertility Surveying crop production from the farm management standpoint. The nature and use of crop plants. The nature of soils Protecting our soil from erosion. Manuring, fertilizing, and liming field crops. Securing the best crop varieties Growing seed on the farm. Preparing seed beds—planting and cultivating crops. Marketing crops and cooperative programs. Controlling crop diseases. Controlling insect pests. Controlling weeds. Part II: Corn growing. Wheat and rye growing. Oats, barley buckwheat, and flax growing. Sorghum growing. Growing soybeans and cowpeas. Growing the clovers. Growing lespedeza and other legumes. Growing grasses and legumes for hay and pasture. Managing pastures. Potato growing. Field-bean growing. Growing special field-truck crops. The home-farm food supply Food from the garden, fields, woods, and ponds. Index.

Note (4890) A simple but authoritative treatment intended chiefly for classes in rural high schools but useful also to general readers who desire an introduction to the current methods of crop production and soil conservation. In this edition recent developments such as DDT are described and the lists of references have been revised.

GARNER WIGHTMAN WELLS

The production of tobacco Philadelphia. The Blakiston Company 1946 516 p. illus. 24 cm. (Blakiston books on agriculture, Gilbeart H Collins consulting editor) $4.50. 2430

Contents (abridged) Part One, The tobacco industry: The tobacco plant and its product, commercial leaf tobacco. History of the tobacco industry and present distribution of production in the United States Part Two, Growing, curing, and marketing the crop: General principles of tobacco culture. Tobacco varieties. Soils and cropping systems for tobacco. Fertilization of the tobacco crop. The seed bed or plant bed. Transplanting, field care of the crop, and harvesting. Curing the leaf. Grading and marketing Tobacco production in other lands. Tobacco diseases and their control. Insect pests of tobacco and their control. Part Three, Physiology chemistry and genetics of tobacco Elements of quality in tobacco and factors influencing them. Mineral nutrition of tobacco. Characteristics of tobacco soils. Climate, weather, and cultural practices in relation to yield and quality Curing, fermentation, and aging of tobacco Chemical composition of tobacco and its relation to type and quality Tobacco genetics and breeding. Tobacco manufactures. Bibliography Index of authors. Subject index.

Note. A comprehensive work in which the agricultural aspects of tobacco are given most of the space, and allied topics such as the manufacture of tobacco products are treated more concisely The

book is suitable for use as a textbook in agricultural colleges and as a source of general information. It describes chiefly agricultural practices in the United States, but practices in other countries are outlined. References to the pertinent literature are furnished in the text and the bibliography. The author is a specialist; he was formerly in charge of the Division of Tobacco Investigation of the United States Department of Agriculture.

HUTCHESON THOMAS BARKSDALE, AND OTHERS

The production of field crops, a textbook of agronomy by T B Hutcheson T K. Wolfe, and M S Kipps. Third edition. New York McGraw Hill Book Company Inc., 1948 430 p. illus. 23 cm. (McGraw Hill publications in the agricultural sciences R. A. Brink, consulting editor) $4.50 2431

Contents (abridged) Section I, General Beginnings of plant culture. Adaptation of crops. Germination and growth. Plant improvement. The value and use of good seed. Fertilizers and farm manures. Preparation of the seedbed. Tillage. Harvesting and storage of grain crops. Haymaking. Silage. Pasture and meadow management. Weeds. Crop rotation. Section II, Cereal or grain crops: Corn. Oats. Barley Rye. Section III, Legumes for seed. Peanuts. Soybeans. Cowpeas, field peas, and field beans. Section IV Forage crops: Pasture and hay grasses. Clovers. Alfalfa. Miscellaneous forage and seed crops. Section V Root crops: Sweet potatoes—carrots—mangels—turnips. Section VI, Fiber crops: Cotton—flax—hemp. Section VII, Tubers: Potatoes. Section VIII, Sugar plants: Sugar beets and sugar cane. Section IX, Stimulants: Tobacco. Index.

Note: (4096a) A textbook of wide regional application which has been in use in American colleges of agriculture since 1924. The treatment is thorough yet compact enough to be presented in a one-semester course; it includes fundamental principles of crop production, common practices, and the requirements of individual plants. In this edition the text and illustrations have been brought up to date. A new chapter on miscellaneous forage and field crops has been added, the information on the Mid-West and Great Plains regions has been expanded, and additional material has been introduced on weed control, seedbed preparation, silage, hybrid corn, and grass mixtures.

MULLER, CORNELIUS HERMAN

Root development and ecological relations of guayule. Washington D C Government Printing Office, 1946 114 p. illus. 23 cm. (United States. Department of Agriculture. Technical bulletin no 923) Paper $0.25 2432

Contents: Introduction. Materials and methods. General character of guayule. Ecology of native guayule and mariola. Habitat of native guayule. Root habit of native guayule. Habitat and root habit of native mariola. Sociological relations of native guayule. Ecology of cultivated guayule: Root habit of cultivated guayule. Chronology of seedling development. Comparative growth of seedlings and transplants. Comparative growth of transplants and rooted stem cuttings. Root development of nursery-grown plants. Effects of soil factors on root response. Effects of competition of various kinds. Regeneration. Comparison of mariola and guayule under cultivation. Summary. Literature cited.

Note. The crucial need for rubber during World War II and the great interest in guayule as a source of rubber gave impetus to extensive research on the nature, cultivation, and rubber yield of guayule. The present study of the root habits of the species is one of the publications resulting from the work of the Special Guayule Research Project at Salinas, California, and elsewhere in the Southwest. Other paper-covered Department of Agriculture Technical bulletins dealing with the subject of guayule are the following: Artschwager, Ernst, *Growth studies on guayule (Parthenium argentatum)* 1945 19 p., $0.10; Bergner, A Dorothy, *Polyploidy and aneuploidy in guayule*, 1946, 34 p. $0.10 Federer, Walter T *Variability of certain seed, seedling, and young-plant characters of guayule* 1946, 71 p., $0.10, Benedict, Harris M and Jeanette Robinson, *Studies on the germination of guayule seed*, 1946, 48 p., $0.10; Erickson, Louis C., and Paul F Smith, *Studies on handling and transplanting guayule nursery stock*, 1947 53 p., $0.20; Wadleigh, C. H., and others, *Growth and rubber accumulation in guayule as conditioned by soil salinity and irrigation regime*, 1946, 34 p., $0.10.

SHOEMAKER, JAMES SHELDON

Vegetable growing New York John Wiley & Sons, Inc., 1947 506 p illus 22 cm $4.50 2433

Contents: Vegetable seed production. Perennial vegetable crops. Corn crops. Root crops. Legume or pulse crops. Bulb crops. Salad crops. Green crops. Cole crops. Potato. Sweetpotato. Solanaceous fruits. Vine crops. Miscellaneous vegetables, mushrooms, and herbs. Insect and disease control. References. Index.

Note: This practical manual is designed as a text for agricultural students and as a reference tool for commercial growers. All of the major market vegetables of the United States and Canada are carefully considered from the grower's standpoint, and the scientific aspects of seed selection, soil, planting techniques, cultivation, and harvesting are outlined for each crop. Plant characteristics and detailed classifications of types are in most instances included, as well as mention of historical development, market requirements, and a number of miscellaneous suggestions for improved production. There are numerous illustrations and a list of references.

SIEVERS ARTHUR FREDERICK

Production of drug and condiment plants. Washington, D C. Government Printing Office 1948 99 p illus. 23 cm. (United States. Department of Agriculture. Farmers' bulletin no 1999) Paper $0.30 2434

Contents: Economic background. The more important plants. Yields. Propagation, culture, and general handling: Propagation. Culture. Harvesting. Drying. Distillation of volatile oils. Baling, packaging, and storing. Marketing. Cultivation of individual species: Aconite. Althea. Angelica. Anise. Arnica. Basil. Belladonna. Boneset. Burdock. Calendula. Camomile. Caraway. Castor-bean. Catnip. Cayenne. Celery. Colchicum. Coriander. Cumin. Dandelion. Digitalis. Dill. Echinacea. Elecampane. Fennel. Gentian. Ginger. Ginseng. Goldenseal. Henbane. Horehound. Larkspur. Lavender. Licorice. Lobelia. Lovage. Marjoram. Mullein. Mustard. Orris. Paprika. Parsley. Pennyroyal. Peppermint. Pinkroot. Pokeroot. Sage. Savory. Senna. Spearmint. Stramonium. Tansy. Tarragon. Thyme. Valerian. Vetiver. Wintergreen. Wormseed (American). Wormwood.

Note: Superseding *Farmers' bulletin* no. 663, this new manual is a practical guide for those interested in the production on an economic scale of drug plants and leaf and seed condiments in the United States. Many of these medicinal and condiment plants are imported regularly from abroad. This bulletin indicates which can profitably be grown in the United States and gives practical directions for their cultivation. Related bulletins are *Farmers' bulletin* 1977 *Savory herbs: culture and use*, and *Farmers' bulletin* 1988, *Mint farming*

WILSON HAROLD KIRBY

Grain crops. New York McGraw Hill Book Company, Inc. 1948 384 p illus. 24 cm. (McGraw Hill publications in the agricultural sciences, R. A. Brink, consulting editor) $4.00 2435

Contents: Grain crops and environment. Plant classification. Distribution of grain crops. Crop rotation. The culture of grain crops. Weeds. Diseases of grain crops. Insect pests of grain crops. Wheat and rye. Oats. Barley. Flax. Rice. Buckwheat. The millets. Soybeans. Corn growing. Corn harvesting and storage. Sweet corn. Popcorn. Sorghum. Marketing of grain crops. Improvement of grain crops. Index.

Note: Primarily this is a textbook for use in full-length courses in agricultural colleges. It has been developed from material used by the author in teaching at the University of Minnesota for a period of some years. It provides a comprehensive but rather condensed description of this branch of farming as it is carried out in the United States at the present time. A considerable amount of space is given to pest and insect control with emphasis on modern methods such as the control of weeds by the use of chemicals. The chapters devoted to the individual grains contain background material such as the mechanical classifications of uses and marketing as well as full discussions of culture. Each chapter is accompanied by review questions for use in teaching and by adequate lists of references to related publications.

WESTCOTT CYNTHIA

The gardener's bug book 1,000 insect pests and their control. With 100 full-color illustrations by Eva Melady and 100 line drawings by Eva Melady & J E. Edmonson. Edited by F F Rockwell. New York The American Garden Guild Inc., and Doubleday & Company Inc., 1946 590 p. illus. (part col'd) 24 cm. $4 95 2425

Contents: Editor's forward. List of color plates. Introduction. How to use this book. Insects in the garden. Garden chemicals. Spraying, dusting, fumigation. Insects in order. The bugs. Host plants and their pests. It's not so bad as it seems. Bibliography. List of experiment stations. Glossary. Index.

Note. Although written for amateur gardeners, even gardeners whose activities do not extend beyond a few house-plants, this book is exceptionally complete and practical. Not all of the known insect pests are included but practically all of them which will be encountered by gardeners on the North American continent are described and one hundred of them are shown in full color. The others are portrayed in black and white drawings. All of the practical control methods are described, including the new insecticides such as DDT. The lists of host plants and their pests runs to more than one hundred pages and is one of the book's most useful features. Books included in the bibliography are described in short annotations.

ZIMMERMAN, OSWALD THEODORE, AND IRVIN LAVINE

DDT killer of killers Dover N H. Industrial Research Service, 1946 180 p. illus 19 cm. U.S, $3.25 foreign countries, $3 60 2426

Contents: Man's mortal enemies. DDT is born. Not too hot to handle. DDT formulations. Common insect enemies. Old mother nature. The end of the story. Appendix. Instructions for the use of DDT in the control of the common insect pests that affect man and animals. Instructions for the use of DDT on vegetables, fruits, flowers, and shade and forest trees. Index.

Note: Information for the general public about DDT is the subject of this easily read book. The authors start with a short account of the epidemics caused by insect-borne diseases. This is followed by discussions of the discovery and rediscovery of DDT, its toxicity to insects and animals, the various insecticides made with DDT, and how destructive insects are controlled by them. The appendix contains a recapitulation of instructions for using DDT compounds to control insect pests. The book is a strictly popular one, and is not intended for use in research.

FIELD AND VEGETABLE CROPS

AHLGREN, GILBERT HAROLD, AND OTHERS

Practical field crop production for the Northeast an elementary introduction to agronomy by Gilbert H. Ahlgren, Robert S Snell, John C Anderson and Milton A. Sprague. Van Wie Ingham, editor New Brunswick, N J Rutgers University Press 1947 437 p illus. 23 cm $4.00. 2427

Contents (abridged) The plant and how it grows. Grasses and legumes. Seed and seed treatment. Soil improvement practices. Soil and water conservation practices. Corn production in the Northeast. Small-grain production. The main hay crops. Care and hay-crop silage. The economy of pasture production. Extending the pasture season. White potatoes. Sweet potatoes. Soybeans and field beans. Tobacco. Weed control. Appendices: Field crop varietal recommendations for the Northeast (by states). State experiment stations and federal research laboratories in the Northeast. Glossary. Index.

Note A textbook based on present agricultural conditions and practices in the American northeastern states and specifically intended for students in the high schools, vocational schools, and agricultural colleges of that area. Review questions, projects, and suggested additional readings for the student are included with each chapter. The authors are faculty members of the Agricultural College in Rutgers University.

COMIN DONALD

Onion production. New York Orange Judd Publishing Company, Inc. 1946 186 p. illus. 20 cm. $2 00 2428

Contents: Origin and development. The onion as a crop plant. Adaptation to climate and soil. Types and varieties for every use. Growing early, intermediate and late crops. Soils and their management. Planting and care of the crop. The specialized industry of onion seed and set production. Growing green onions for bunching. The most troublesome diseases and insects affecting the onion. Harvesting and storing the crop. Costs and returns in producing onions. The onion as food. References. Index.

Note: A simple treatise that discusses all aspects of the commercial production of onions and the related crops of chives, shallots, leeks, and garlic. The volume is intended for farmers, especially truck gardeners. The author is Assistant Horticulturist, Ohio Agricultural Experiment Station, Wooster Ohio.

COX, JOSEPH FRANK, AND LYMAN E. JACKSON

Crop management and soil conservation. Second edition. New York John Wiley & Sons Inc., 1948. 572 p. illus. 21 cm. (The Wiley farm series A. K. Getman and E. R. Eastman, editors) $3.80 2429

Contents (abridged) Part I, Balancing crop production and maintaining fertility. Surveying crop production from the farm management standpoint. The nature and use of crop plants. The nature of soils. Protecting our soil from erosion. Manuring, fertilizing, and liming field crops. Securing the best crop varieties. Growing seed on the farm. Preparing seed beds—planting and cultivating crops. Marketing crops and cooperative programs. Controlling crop diseases. Controlling insect pests. Controlling weeds. Part III Corn growing. Wheat and rye growing. Oats, barley, buckwheat, and flax growing. Sorghum growing. Growing soybeans and cowpeas. Growing the clovers. Growing lespedeza and other legumes. Growing grasses and legumes for hay and pasture. Managing pastures. Potato growing. Field bean growing. Growing special field truck crops. The home farm food supply. Food from the garden, fields, woods, and ponds. Index.

Note: (4990) A simple but authoritative treatment intended chiefly for classes in rural high schools but useful also to general readers who desire an introduction to the current methods of crop production and soil conservation. In this edition recent developments such as DDT are described and the lists of references have been revised.

GARNER WIGHTMAN WELLS

The production of tobacco Philadelphia The Blakiston Company 1946 516 p. illus. 24 cm. (Blakiston books on agriculture, Gilbeart H. Collins consulting editor) $4.50 2430

Contents (abridged) Part One, The tobacco industry. The tobacco plant and its product, commercial leaf tobacco. History of the tobacco industry and present distribution of production in the United States. Part Two, Growing, curing, and marketing the crop. General principles of tobacco culture. Tobacco varieties. Soils and cropping systems for tobacco. Fertilization of the tobacco crop. The seed bed or plant bed. Transplanting, field care of the crop, and harvesting. Curing the leaf. Grading and marketing. Tobacco production in other lands. Tobacco diseases and their control. Insect pests of tobacco and their control. Part Three, Physiology, chemistry and genetics of tobacco. Elements of quality in tobacco and factors influencing them. Mineral nutrition of tobacco. Characteristics of tobacco soils. Climate, weather and cultural practices in relation to yield and quality. Curing, fermentation, and aging of tobacco. Chemical composition of tobacco and its relation to type and quality. Tobacco genetics and breeding. Tobacco manufactures. Bibliography. Index of authors. Subject index.

Note: A comprehensive work in which the agricultural aspects of tobacco are given most of the space, and allied topics such as the manufacture of tobacco products are treated more concisely. The

are also short articles about the sources of honey within the borders of individual states of the United States.

PELLETT FRANK CHAPMAN
A living from bees. Revised edition. Illustrated. New York Orange Judd Publishing Company Inc. 1946 335 p illus 20 cm. $2.50 2455

Contents (abridged) Beekeeping, business or sideline. Keeping bees in town. The honeybee family Bee pasture. Regional differences. Need of bees in agriculture. About beehives. Use of comb foundation. Queen rearing. Through the year in the apiary Getting the honey to market. Diseases and enemies of bees. Wintering the bees. Famous American beekeepers. Glossary of beekeeping terms.

Note: (4961) A practical guide for beginners. It describes basic practices and manipulations and does not attempt to provide detailed instructions for every phase of the subject. This edition has been enlarged by the inclusion of additional bee-handling techniques, and by discussions of the part played by bees in seed production and pollination.

ANIMAL HUSBANDRY

BENNETT RUSSELL H
The compleat rancher with drawings by Ross Santee. New York Rinehart & Company, Incorporated, 1946 246 p illus. 22 cm. $2 75 2456

Contents: The country The apprenticeship. The critter. The ranch homestead. Feeding and buying. The horse. Ranch recreation. Ranch economics. Conclusion. Bibliography

Note: An informal but nonetheless keen analysis of the business of beef cattle production on ranges in the United States. It is addressed particularly to persons who are thinking of going into the business. It is written in narrative style, and is printed without subdivisions or subheads within the chapters. Also there are no tables or other statistical apparatus such as usually characterize books on this subject. The illustrations are limited to such things as decorative chapter heads. The style and the format are obviously intended to facilitate reading. The book can be considered as light reading of a fruitful kind for persons who are sufficiently attracted by ranch life to consider devoting time or money to it.

LUSH, JAY LAURENCE
Animal breeding plans. Third edition. Ames Iowa The Iowa State College Press 1945 443 p. illus. 24 cm. $4.00 2457

Contents: Background of animal breeding. Genetic principles in animal breeding. Breeding plans based on selection. Breeding plans based on relationship. Breeding plans based on genetic likeness. Other topics concerning breeding plans. Topics relating to reproduction. Summary Subject index.

Note (4945) A manual of information for the livestock grower interested in perfecting inherited characteristics of his animals. The book is also intended as a text for agricultural college students who have completed courses covering such topics as stock judging, history of breeds, herdbook study and the genetics, embryology anatomy and physiology of farm animals. Essentially the work is practical application of genetics to animal breeding. Bibliographic references are appended to most of the chapters. Revision of the chapters on size indexes represents the only major change made in preparing the third edition.

MAYNARD LEONARD AMBY
Animal nutrition. Second edition. New York McGraw Hill Book Company, Inc. 1947 494 p. illus. 24 cm. (McGraw Hill publications in the agricultural sciences Leon J Cole, consulting editor) $5 00 2458

Contents: The expanding field of nutrition. The animal body and its food. Some physicochemical bases of life processes The carbohydrates and their metabolism. The lipids and their metabolism. The proteins and their metabolism. The inorganic elements and their metabolism. The vitamins. Feeding experiments—the determination of digestibility Nutritional balances. Measures of food energy The fasting catabolism—maintenance. Growth. Reproduction. Lactation. Work production. List of visual aids. Author index. Subject index.

Note. (4949) The basic principles and the more important experimental findings in nutrition are related to the metabolism of farm animals. The work does not deal with feeds and feeding but rather with the scientific knowledge and investigations that are the foundation of feeding practices. It is designed primarily for advanced undergraduate and graduate students, but is useful also as survey and reference book for county agents, teachers, and beginners in research. Extensive changes have been made in this edition, which has been revised to cover advances reported through March, 1946. Related literature is liberally cited in footnote references and in chapter reference lists.

MORRISON FRANK BARRON
Feeds and feeding, a handbook for the student and stockman. Assisted by Elsie B Morrison, Spencer H. Morrison, Roger B Morrison, and Harriet W Morrison. Twenty-first edition, unabridged (fiftieth anniversary) Ithaca, N Y The Morrison Publishing Company 1948 1207 p illus. 23 cm. $7 00 2459

Contents (abridged) Part I, Fundamentals of animal nutrition The digestion, absorption, and use of food. Measuring the usefulness of foods. Minerals in livestock feeding. Vitamins in livestock feeding. Balanced rations—feeding standards. Economy in feeding livestock. Part II, Feeding stuffs: Pasture and other forage. Hay and hay-making. Silage and crops for silage. Legumes for forage. Indian corn and sorghums for forage. Roots, tubers, and miscellaneous forages. Corn and oat grains and their by-products. The other cereals and by-products. Manurial value of feeding stuffs. Part III, Feeding farm animals: Feeding and caring for dairy cows. Feed and care of beef cattle. Feeding and caring for sheep and lambs. Horses and mules—general problems Feeding and care of swine. Feeding and caring for poultry Appendix: Average composition of American feeding stuffs; digestible nutrients; mineral and fertilizing constituents; digestion coefficients. Estimated net-energy values of feeding stuffs and feed evaluation constants. Morrison feeding standards for farm animals. Example rations for farm animals. Grain feeding tables for dairy cows. Amino acid content of certain feeds. Index.

Note. (4970) As indicated in the title this work has been used in its various editions for fifty years It is a comprehensive digest of the published knowledge concerning the nutritional requirements and the feeding of the larger farm animals, together with full information concerning the composition, use, and value of the many different feedstuffs, especially those of importance in the United States. The work is used both as a textbook in agricultural colleges and as a reference manual by large scale and medium scale livestock breeders and feeders. The chapters are accompanied by lengthy bibliographies of the related publications of agricultural agencies, and other pertinent material. Revisions in this edition are extensive and important. The useful tables of data on the composition of feedstuffs have been completely revised. The work is 177 pages longer than in the previous edition.

PERRY ENOS J editor
The artificial insemination of farm animals. Revised edition. New Brunswick N J Rutgers University Press 1947 338 p illus 22 cm. $4 00 2460

Contents: Historical, by E. J Perry Advantages and limitations, by E. J. Perry The organs of reproduction, by J Edwards. The role of hormones in reproduction, by R. P Reece. General information, by E. J. Perry Factors influencing the quality and quantity of sperm, by E. J Perry Cattle, by E. J. Perry Sheep and goats, by C. E. Terrill. Horses and jackstock, by V Berliner Birds, by F P Jeffrey Swine, by E. J. Perry Breeding better livestock, by J. W Bartlett. Systems of breeding, by J. W Bartlett. Selection of sires, by J W Bartlett. Co-operative artificial breeding associations, by E. J. Perry Shipping of semen, by E. J. Perry Disease in relation to artificial insemination, by J. A. Henderson. Feeding and management of sires, by J. W Bartlett. Index.

Note: Together the papers in this volume constitute an authoritative and comprehensive treatment. Practical methods of sperm collection and handling are described in detail. Allied subjects of value in planning livestock improvement programs are discussed. The chapter on cooperative artificial breeding associations is a guide to the organization and management of such associations. The book is addressed to veterinarians, county agricultural agents, officers of

breeding associations, and farmers. The present edition contains two new chapters, and other chapters have been revised.

PHILLIPS, RALPH WESLEY, AND OTHERS

The livestock of China, by Ralph W Phillips Ray G Johnson and Raymond T Moyer Washington D C. Government Printing Office, 1945 174 p illus 23 cm (United States. Department of State. Publication 2249 Far Eastern series 9) Paper $0.30 2461

Contents Introduction. Geography climate, and people. Livestock numbers. Horses. Donkeys. Mules. Camels. Cattle. Water buffalo. Yak and "pien niu" Sheep. Goats. Swine. Chickens. Ducks. Geese. Improving Chinese livestock. Conclusions. Literature cited.

Note Based upon periods of travel, study and experiment by the authors in China, this work is comprehensive account of the large and varied livestock population of China, with photographic illustrations, maps, and tables. Types of livestock with their geographic distribution, management, housing, feeding, marketing, and breeding are discussed. The longest chapters are those on sheep and swine. The authors state that, owing to wartime conditions and other limitations, the information is incomplete and that much more data must be assembled before complete description of China's livestock can be had.

WALSH HELEN

Starting right with milk goats edited by Ed Robinson. New York The Macmillan Company 1947 138 p illus. 22 cm. $3 00 2462

Contents: There's milk in your backyard. What breed to buy? How to buy good doe. The goat's quarters. Feeding for more milk. Grooming the goat. Milking and care of milk and equipment. Breeding—good and bad. The buck. Kidding. Feeding the kids. Removing horns. Chevon. Keeping goats healthy. Goat milk and cream. Making butter at home. Making cheese from goat milk. What to do with manure. Goats as business. Index.

Note Although frankly intended for the beginner especially beginners interested in keeping only small number of goats to supply milk for family many aspects of the subject are discussed and much information given that is useful in larger ventures. The author has had long experience in raising goats. The book is part of an unnumbered series entitled *The "have-more" plan reference library* of which the key volume is Ed Robinson and C Robinson, *The "have-more" plan*, New York, 1947 (see Index)

WINTERS, LAURENCE MERRIAM

Animal breeding. Fourth edition. New York John Wiley & Sons Inc. 1948 404 p. illus. 24 cm. $4.50 2463

Contents: The economic importance of animal improvement. Historical background. The reproductive organs. Gametogenesis and the physical basis of heredity. The breeding cycle and the sex hormones. Fertilization and prenatal development. The role of heredity. Fundamental Mendelism and animal breeding. Lethals. Sex. Selection. The effectiveness of selection. Inbreeding. Crossbreeding. Purebred breeding. Grading. Prepotency. Fertility. Artificial insemination. Building superior germ plasm. Bibliography. Glossary. Index.

Note (4901a) A standard work which is used both as an agricultural college textbook and as manual by livestock breeders. It covers both the modern basic knowledge of genetics and the related subjects that are important in practical breeding programs. Major improvements in this edition include the revision of several chapters, notably those dealing with prenatal development, selection inbreeding, crossbreeding, purebred breeding, fertility and artificial insemination the addition of the final chapter and the revision of the bibliography

DAIRYING AND DAIRY PRODUCTS

ADAMS, HAROLD S

Milk and food sanitation practice. New York The Commonwealth Fund, 1947 311 p illus. 24 cm. $3.25 2464

Contents. Milk sanitation. History and public health importance of milk control. Planning and administering milk control program. Essentials of sanitary milk production. Undesirable flavors in milk. The pasteurization process. Plans for the modern pasteurization plant. Pasteurization plant equipment and inspection. Pasteurization plant practices. Laboratory procedures used to evaluate milk supply. The sanitary control of frozen desserts. Bibliography—Section on milk. Food sanitation. The food control problem. Essentials of food establishment sanitation. The instruction and training of food handlers. Bibliography—Section on food. Appendix. Index.

Note The author wastes little time in surveying past and present deficiencies in public sanitation but devotes the text to practical methods of achieving desired standards. Presentation is direct and instructions are detailed, accordingly there is much to recommend the book to large-scale milk producers and food dispensers, although it is actually designed for present and potential sanitation officers. Approximately twice as much space is given to the problems of milk production as to other foods in general, with especial emphasis on pasteurization techniques. Bibliographies are extensive and the supplementary material of some fifty pages, detailing the sanitarian's necessary equipment, report forms, and educational outlines, should be especially helpful.

AMERICAN PUBLIC HEALTH ASSOCIATION

Standard methods for the examination of dairy products microbiological bioassay and chemical. Ninth edition Microbiological and bioassay methods formulated by committees of the American Public Health Association and approved for publication by the American Public Health Association Chemical methods compiled by the Committee on Editing Methods of Analysis of the Association of Official Agricultural Chemists and approved for publication by that association at its annual meeting in Washington October 25–26 1944 New York American Public Health Association 1948 373 p illus 24 cm. $4 00 2465

Contents: Selection and interpretation of quality tests. Microbiological methods for milk and cream. Detection of special bacterial groups or species. Microbiological methods for butter. Microbiological methods for cheese. Microbiological methods for frozen dessert ingredients. Microbiological methods for frozen desserts. Sterility tests for dairy equipment. Tests for sediment and extraneous matter in dairy products. Determination of vitamins. Phosphatase methods to determine pasteurization. Chemical methods. Screening tests. Index.

Note. (5001) A standard and more or less official handbook for public health and food inspection workers in the United States of America. The present edition has been rather extensively reorganized, and the index has been much improved. As in the editing of earlier editions, superseded methods have been deleted and new methods hich have become accepted have been added.

ESPE DWIGHT

Secretion of milk. Third edition. Ames, Iowa The Iowa State College Press, 1946. 320 p illus. 23 cm. $3 75 2466

Contents Phylogenetic development of the mammary gland. Anatomy of the udder. Nervous control. Theory of milk secretion. Factors affecting the amount and composition of milk. Miscellaneous factors related to milk secretion. Hormonal control. Effect of feed on the amount and composition of milk. Literature cited. Recent literature not cited in text. Index.

Note (4901) Essentially this book is digest and critical review of the literature pertaining to milk production in dairy cows. Anatomy physiology endocrinology and the effects of feeds and artificially-administered hormones are discussed in concise text hich is key-numbered to an extensive list of literature references. Many points are made that are of value to the practical farmer, but the chief uses of the book are as supplementary text in agricultural college courses, and as reference handbook in research. In this edition the text and bibliography have been revised to incorporate the knowledge published since 1941. The second printing issued in 1948 contains references as late as 1947

FOUTS EVERETT LINCOLN, AND THEODORE R. FREEMAN

Dairy manufacturing processes a hand book for dairy plant workers and short course students. New York John Wiley & Sons Inc. 1948 237 p. 24 cm. $3.50 2467

Contents (abridged) Ice cream manufacture, sherbets and ices: Dairy products used in making ice cream. Figuring ice cream mixes. Freezing the ice cream. Flavoring ice cream. Sherbets and ices Market milk and related products: Composition of milk, definitions, legal standards. Standardization of the fat content of milk and cream. Pasteurization of milk. Bottling milk—capping and hooding. Chocolate milk drinks. Washing and sterilizing bottles, cans and equipment. Buttermaking: Churning. Washing the butter Working the butter. Storing butter. Soft cheeses: Cottage cheese. Neufchatel and cream cheese. Testing dairy products. Index.

Note A manual of practical information written for the guidance of dairy workers engaged in the manufacture and processing of milk, ice cream, butter and soft cheese. It is intended to be used as handy reference tool which will provide answers to questions regarding the composition of milk and its products, keeping qualities, types of equipment needed and methods of operation, pasteurization and homogenization, accepted standards, etc. Almost half of the volume deals with the making of ice cream mixes (for which formulas are included) use of flavors, and whipping and freezing methods. In an effort to make the material readily accessible, the main topics within each chapter are arranged alphabetically

HAMMER, BERNARD WERNICK

Dairy bacteriology Third edition New York John Wiley & Sons Inc. 1948 593 p. illus. 24 cm. $6.00 2468

Contents: Bacterial counts on milk. Tests for the general quality of raw milk. Milk fermentations. Contamination of milk and its control. Bacteriology of filtration, clarification, and separation Growth of bacteria in milk and cream Milk enzymes. Spread of diseases through milk and milk derivatives. Pasteurization. Bacteriology of evaporated milk. Bacteriology of sweetened condensed milk. Bacteriology of milk powder. Bacteriology of ice cream Bacteriology of lactic acid cultures. Bacteriology of fermented milk preparations. Bacteriology of butter Bacteriology of cheese. Bacteriology of dairy-plant water supplies. Index

Note: (3008) A concise presentation of the essential facts relating to the bacterial aspects of dairy processes, methods, and controls. The volume is standard work and is intended for use in agricultural colleges and as reference manual for research workers in the dairy industry Emphasis is placed on fermentation in milk and its derivatives. As in the previous editions, knowledge of elementary bacteriology on the part of the reader has been assumed. This edition has been considerably enlarged. A new chapter on dairy-plant water supplies has been added, and milk powder butter, and cheeses are discussed at greater length.

HERRINGTON BARBOUR LAWSON

Milk and milk processing New York Mc Graw Hill Book Company Inc. 1948 343 p illus. 23 cm. (McGraw Hill publications in the agricultural sciences, R. A. Brink, con sulting editor) $3 75 2469

Contents (abridged) The dairy industry Milk—it's nature and properties. The fats of milk. The principal proteins of milk Lactose and the carbohydrates The minor constituents of milk. Variation in the composition of milk. Acidity Microorganisms Pasteurization. Creaming and cream separation. Homogenization The market-milk industry The butter industry Concentrated milks. The dry-milk industry The ice-cream industry The cheese industry The casein industry The Babcock test. Lactometry Index

Note: A brief but authoritative treatment. It covers the chemistry of milk and milk products in some detail, describes the various processes which milk undergoes before it is sold to the consumer and surveys briefly the economics and techniques of the industries based on milk. The main use of the book as text is introductory courses in dairy science; but the information it provides on milk as food and on the American milk-marketing industries makes it useful to several groups of readers including workers in the nutrition field and consumers.

LAMPERT LINCOLN MAXIMILIAN

Milk and dairy products their composition, food value, chemistry bacteriology and processing. Brooklyn, N Y Chemical Publishing Co. Inc. 1947 291 p illus 22 cm. $7.00 2470

Contents (abridged) Milk, its value as food and its composition. The vitamins in milk. Some fundamentals of dairy bacteriology Pasteurization—raw milk versus pasteurized milk. Diseases that may be carried and spread by infected milk and infected milk products. Grades of milk. Human milk—goat' milk. Cream—skim milk—buttermilk—whey Homogenized milk—soft curd milk—frozen milk—chocolate milk—evaporated milk—condensed milk. Ice cream. Principles of dairy tests—examples in dairy arithmetic. Appendix. Bibliography Index.

Note. A book of information for the layman and dairyman that deals in non-technical way with the properties and processing of milk for human consumption, and with some of the products such as butter and cheese that are made from milk. The bibliography contains 213 references for readers who want additional information on the subject. This book appears to be aimed at persons who are beginning work in dairy plants and desire information about the industry It is useful also as reference book for consumers. Specific information is given on milk products, their qualities, and their processing. The author is Senior Dairy Chemist of the California Department of Agriculture.

SWETT WALTER WHITTIER, AND OTHERS

Development of the fetus in the dairy cow by W W Swett, C. A. Matthews, and M. H Fohrman. Washington, D C. Government Printing Office, 1948 34 p. illus 23 cm. (United States. Department of Agriculture. Technical bulletin no 964) Paper $0 15 2471

Contents Introduction and review of literature. Source and nature of data used. Presentation of data. Weight of gravid uterus and its various contents at successive stages of gestation. Proportion of full-term weight of gravid uterus and of each of its various contents, made in successive 30-day periods during pregnancy Increase in weight of gravid uterus and of each of its various contents for successive 30-day periods of gestation, expressed as percentages of the weights for the preceding period. Proportion of total weight of gravid uterus represented by its various contents at successive stages of gestation. Skeletal growth of fetus. Comparison of growth in body weight and in skeletal dimensions, during fetal and postnatal life. Body proportions of fetus at successive stages of development and in relation to body proportions of cow Summary Literature cited.

Note: A presentation of data based on the examination of 113 slaughtered pregnant cows. Its purposes are to facilitate the evaluation of such factors as nutrition, disease, and inheritance, and to aid in the interpretation of physical changes in the cow during pregnancy The work is of interest in both practical and experimental dairy husbandry

WILSTER, GUSTAV HANA

Practical butter manufacture a manual for buttermakers. Fifth edition. Corvallis, Ore. Published by OSC Cooperative Association 1946 269 p illus. 23 cm. $3 00 2472

Contents (abridged) Production and consumption of butter in the United States 1849–1941. World production of butter Criteria for the manufacture and preparation for market of excellent quality butter Sanitation of creameries. Milk and cream flavors. Factors in the production and handling of milk and cream. Transportation of milk and cream. Bacteria yeasts and molds. The creamery water supply Cleaning compounds and their use. Acidity of milk and cream. Pasteurization of cream. The preparation and use of starter. Churning. Washing, salting and working butter Method of testing butter for composition. Chemical and physical characteristics of milk fat. Packing butter. Deterioration of butter during storage. Grades of butter. Cleaning the churn and equipment. Insect and rodent control. Yeast and mold control. Control of the pH of butter serum. Unsatisfactory conditions in connection with butter manufacture. Examples of technical control of butter manufacture. Questions on buttermaking. Publications of interest to buttermakers. Appendix. Index. Tables.

Note: This manual of buttermaking may be used as a reference volume by commercial buttermakers and as a text by young men wishing to prepare to enter the industry or to better their positions. In the fifth edition additional data have been included to make the book satisfactory as a text in college courses of butter manufacture. The manual was first prepared for the buttermakers of the Inter-state Associated Creameries and is now used extensively in western states of the United States.

WOODWARD, THOMPSON ELWYN, AND R. R. GRAVES

Results of inbreeding grade Holstein-Friesian cattle. Washington D C Government Printing Office, 1946 39 p illus. 23 cm. (United States. Department of Agriculture. Technical bulletin no 927) Paper, $0 10 2473

Contents. Introduction. Breeding of bulls used. Breeding of foundation cows. Results of inbreeding: Services required for conception. Normality of calves. Birth weight of calves. Mortality of calves. Rate of increase in weight of calves. Changes in body weight after 2 years of age. Conformation and vigor. The production of milk and butterfat. The transmitting ability for level production of the six sires. Effect on level of production of the close inbreeding to sire Z. The effect of outbreeding on level of production. Summary and conclusions.

Note: In this publication the results of an extended experiment which was carried out at Beltsville, Maryland to determine the effect of inbreeding upon Holstein-Friesian cattle are summarized. The inbreeding was carried through six generations and the data collected were analyzed to determine the influence of inbreeding upon fertility; on normality, birth weight, and mortality of calves; on growth as measured by weight; on the conformation and vigor of the cows; and on the production level for milk and butterfat. The influence of the number of generations of inbreeding on these characteristics was also studied.

MISCELLANEOUS DOMESTIC ANIMALS

AMERICAN KENNEL CLUB

The complete dog book [New and revised edition] The care, handling and feeding of dogs and pure bred dogs the recognized breeds and standards. An official publication of the American Kennel Club with over 100 illustrations by R. W Tauskey and others. Garden City N Y Garden City Publishing Co Inc., 1947 753 p illus. 22 cm. $2 49 2474

Contents (abridged) Book One, The care, handling and feeding of dogs. Selecting a dog. Diseases and common ills of dogs. Housing and kenneling. Breeding. Exercise. Distemper. Rabies. Book Two, Pure bred dogs Group I—Sporting dogs: Griffons. Pointers. Retrievers. Setters. Spaniels. Group II—Sporting dogs (hounds) Group III—Working dogs. Group IV—Terriers. Group V—Toy dogs. Group VI—Non-sporting dogs. Practical dog training. Glossary of technical terms relating to dogs. Index.

Note An encyclopedic manual which contains in general two kinds of information official descriptions of the various breeds of dogs and information about the care and raising of dogs. It is a useful reference book for kennel owners and others who have professional or business interest in dogs. It is also suitable for individual owners, who are interested in pure bred dogs in general but may own only one or two of them. The breed descriptions are full and detailed. They account for most of the book's length.

FAIRCHILD LEWIS HAROLD AND HELEN G FAIRCHILD

Cats and all about them. Introduction by Belle J Benchley Revised edition New York Orange Judd Publishing Company Inc. 1947 243 p. illus 20 cm. $2.50 2475

Contents: The breeds and how to recognize them. Breeding and mating. The kittens and their training. Feeding. Grooming. Registering and showing. The cattery Diseases and injuries Medicines. Drugs toxic to cats—poisons.

Note: A concise but thorough handbook for all who are interested in the breeding and care of cats either as professional breeders or simply as owners of pet cats. The senior author is a doctor of medicine, and the topics covered are treated on a semi-professional rather than a sentimental level. Some new material has been added in this edition, but the changes over the 1942 edition are not extensive.

HICKEY, JOHN HOSFORD, AND PRISCILLA BEACH

Know your dog. New York Harper & Brothers, 1947 337 p illus. 22 cm. $3 00 2476

Contents (abridged) Part I, Breeds. Part II, Training: How to choose a puppy Lessons in home manners. The psychology of the dog and general training. Part III, Feeding and general care of dogs and puppies What to feed your dog. Equipment and accessories for the dog. Care of the mother dog and her puppies Canine ailments and their treatment. Part IV The dog of antiquity and the dog of today: The mystery of the dog's origin. Bench shows and field trials. The classification of dogs in the United States, England, France, Spain, and Germany Glossary of technical terms. Bibliography Index.

Note: A relatively inclusive handbook of information suitable for owners of one or two dogs and also for general reference use in libraries. Part I, in which the various breeds of dogs are described and their histories outlined, accounts for about two-thirds of the book's length. The remaining parts are shorter but contain most of the information needed by average owners. There are twenty-four pages of photographs and drawings, a three-page bibliography and other useful supplementary information such as a list of safe medicines and antiseptics, and a chart of vitamins.

KAMMLADE WILLIAM GARFIELD

Sheep science. Edited by R. W Gregory Philadelphia J B Lippincott Company 1947 534 p illus. 22 cm. (Lippincott's agricultural science series) $5 00 2477

Contents The sheep industry The characteristics of sheep. The habits of sheep. Types and breeds. The Southdown. The Shropshire. The Hampshire. The Suffolk. The Oxford. The Dorset. The Cheviot. The Corriedale. The Columbia. The Leicester The Lincoln. The Cotswold. The Romney The Merinos. The Rambouillet. New and minor breeds. The Karakul. Judging, selecting, and classifying sheep. The organization and operation of a sheep enterprise. Equipment. Sheep breeding. Breeding season practices. Developing a productive flock. The nutrition of sheep. Feeds. Feeding and management practices. Lamb feeding. The character of the business—economic considerations. Selection and purchase of feeder lambs. Feed lot management and rations for fattening lambs. Wool. The meaning of wool terms The wool fiber The value of wool. Wool marketing and manufacturing. Diseases and parasites. The western range and. Managing sheep on the range Index.

Note An inclusive presentation of current practices in the raising of sheep in the United States of America, together with relevant information such as a chapter on the wool trade. It is designed primarily as a textbook for use in agricultural colleges, but it is useful also as an elementary reference book. General principles are emphasized rather than detailed descriptions of specific operations. It is well organized, and the illustrations include reproductions of some exceptionally good photographs. There are scattered footnote citations of related literature.

RINE, JOSEPHINE Z.

The ideal Boston terrier a complete treatise on the history breeding selection care and management of Boston terriers. Revised edition. New York Orange Judd Publishing Company Inc., 1947 272 p illus. 20 cm. $3.00 2478

Contents (abridged) Part I, History—development—conformation History and development. The early sires. General appearance. The skull. The eyes. The muzzle. The ears The body The feet. The tail. Color Coat. Weight. Part II, Mating—whelping—feeding: The

grel dog. The brood matron. Mechanics of whelping. The puppies. Foods and feeding. How to pick the best puppy Preparation for the show ring. Whelping table. The standard. Index.

Note: A general work designed to supply the information needed by fanciers and most breeders. The text is supplemented by more than 100 reproductions of photographs of outstanding dogs of the breed. The author has long experience with this breed and is the author of several other books on dogs. The chapters on the selection of puppy and on preparing dogs for the show ring are new in this edition.

TOWNE, CHARLES WAYLAND, AND EDWARD NORRIS WENTWORTH

Shepherd s empire, with drawings by Harold D Bugbee. Norman University of Oklahoma Press 1946 364 p illus. 22 cm. $3.50 2479

Contents: Columbus, Cortés, and the conquistadores. Sheep at the missions. New Mexican and Californian dons. Gold diggers, soldiers, and saints. Under the Lone Star The Indian—friend and foe. The day of the great sheep trails. Cattlemen war on woolies. Sheep against the sun. Predators take their toll. Poison plants and droughts. Herders and the herded. Lambing and shearing. Men behind the flocks. Bibliography Index.

Note. A fascinating historical account of sheep herding in what is now continental United States of America. The story begins with the introduction of sheep to the American continent by the Spanish conquerors of Mexico, and it is carried down to recent years. Much space is given to the often murderous rivalry between cattlemen and sheepmen in the western United States during the latter part of the nineteenth century Although it is solidly based on contemporary documents, and statements in the text are liberally fortified with footnote citations of the sources of the data, the adventures of sheepherding are played up. The book is of value to students of the history of agriculture, but it is also exciting reading for laymen with an interest in the western United States.

WALL, JOHN FURMAN

Breeding thoroughbreds. New York Charles Scribner's Sons 1946 180 p illus. 24 cm. $3 75 2480

Contents: Introduction Qualifications of the breeder Definitions. Laws of heredity Whence the thoroughbred Pedigrees and stud books. The Jersey act. Bruce Lowe's theories. Foundation mares. Sires. Maternal influence. Selection. Inbreeding—outcrossing. Additional theories. Speed and stamina. Practical factors in mating.

Note: This book, by noted authority on horses, is designed to equip the novice in horse breeding with the necessary elementary knowledge of the subject and to give him practical advice on selecting horses or mates for them. Definitions of terms and an introduction into the fundamentals of genetics are useful start toward this goal, although the language might still be too technical for one entirely unfamiliar with the subject matter The essence of the exposition is that successful breeding depends on mating, which should be guided by five factors: performance, bloodlines, conformation, action, and soundness. The volume contains history of horse breeding in England and America; polemic against unusual restrictions imposed by the two countries against the eligibility of their thoroughbreds; examples of pedigrees; references to literature (in the text and in footnotes) and photographs of foundation mares and sires of thoroughbreds. A warning against the influence of certain theories of breeding is added as an essential part of the practical principles recommended by the author

WHITNEY LEON FRADLEY

How to breed dogs a popular exposition of the scientific principles underlying reproduction and heredity in dogs, with special reference to their practical application. Revised edition. New York Orange Judd Publishing Company Inc., 1947 418 p. illus. 24 cm. $4 50 2481

Contents (abridged) Part I, Reproduction Life and the cell The male organs of reproduction. The female organs of reproduction. The mating cycle. The sex hormones. The role of the vitamins in reproduction. Part II, Principles of heredity: Gregor Mendel—his theory of alternate inheritance. Sex linkage. Inbreeding. Quantitative methods in dog breeding. Variations and pure lines. Part III, Heredity in dogs: Coat color inheritance. The first color inheritance study in dogs. Inheritance of the ticking factor The inheritance of mental aptitudes. The inheritance of body form. Disease resistance. Dog genetic knowledge to 1937 Part IV Some practical considerations: How to start the dog hobby Improving old breeds—creating new ones. Bibliography Index.

Note: The major and most valuable portions of this book are Parts II, III, and IV which discuss the applications of genetics to dog breeding. Here the author who has had considerable experience as dog breeder and has conducted genetic experiments, discusses heredity of various characteristics in dogs and relates the results of crosses and of breeding for color etc., to Mendelian laws. Approximately 111 books and articles are cited in the bibliography Compared to the first edition (1937) additions have been made to the bibliography and there are minor changes in the text.

POULTRY

BIESTER, HARRY EDWARD, AND L. H SCHWARTE, editors

Diseases of poultry Second edition. Ames Iowa The Iowa State College Press, 1948 1154 p illus. 26 cm. $10.50 2482

Contents: Anatomy, by H. L. Foust. Digestion, by E. A. Hewitt. Poultry genetics as related to pathology by N. F Waters and J. H. Bywaters. Avian hematology by C. Olson, Jr. Principles of disease prevention, by W R. Hinshaw Proteins, carbohydrates, fats, fiber minerals, and water in poultry feeding, by L. C. Norris and M. L. Scott. Vitamins and vitamin deficiencies, by R. M. Sherwood and J. R. Couch. Pullorum disease, by H. Van Roekel. Paratyphoid infections, by R. Fenstermacher. Fowl typhoid, by L. D. Bushnell. Fowl cholera, by C. Murray Tuberculosis, by W H. Feldman. Infectious coryza, by J. R. Beach. Brucellosis, anthrax, pseudotuberculosis, tetanus, and vibrio infection, by H. J. Stafseth. Listerellosis, botulism, erysipelothrix, and goose influenza, by M. D. Levine. Streptococcosis, staphylococcosis, arthritis, colibacillosis, and Hjärre's disease, by J L. Hoerlein Diseases caused by fungi, by K. L. Bullis The avian leukosis complex, by E. Jungherr. Infectious bronchitis, by J. R. Beach. Infectious laryngotracheitis, by J. R. Beach. Avian pneumoencephalitis (Newcastle disease) by J. R. Beach. Psittacosis (ornithosis) by K. F Meyer Avian encephalomyelitis (epidemic tremor), by P K. Olitsky Equine encephalomyelitis virus in birds, by L. T Giltner Fowl pox, by C. H. Cunningham. Fowl pest, by E. L. Stubbs. Foot-and-mouth disease in fowl, by P K. Olitsky Rabies and infectious equine anemia, by L. H. Schwarte. Avian monocytosis, by E. Jungherr Neoplastic diseases of the chicken, by W H. Feldman and C. Olson, Jr External parasites of poultry by E. A. Benbrook. Nematodes and acanthocephalids of poultry by E. E. Wehr. Cestodes of poultry by E. E. Wehr Trematodes of poultry, by E. W Price. Protozoa, by E. R. Becker Diseases of the digestive system, by A. J. Durant and H. C. McDougle. Poultry surgery by L. H. Schwarte. Vicious habits and miscellaneous conditions, by L. H. Schwarte. Poisons and toxins, by L. H. Schwarte. Diseases of the turkey by W R. Hinshaw Index.

Note: (8031) Each chapter of this comprehensive reference book for research workers, veterinarians, and large-scale poultry farmers has been prepared by an expert. The current knowledge of each topic is summarized and extensive bibliographies are given at the end of most chapters. In this edition new chapters have been added on disease prevention and Newcastle's disease, some topics have been expanded to form additional chapters, and several of the original chapters have been prepared by new contributors. These and other revisions account for more than 100 additional pages

EWING, WILLIAM RAY

Poultry nutrition. For the use of feed manufacturers, feed dealers feed salesmen and service men, veterinarians hatcherymen, breeders and poultrymen. A text and reference book for instructors students and all persons interested in poultry feeds and feeding. Third edition (revised) South Pasadena, Calif W Ray Ewing, publisher Post Office Box 248 1947 1402 p illus. (part col'd) 23 cm. $12.50 2483

Contents Importance of quality feeds. The egg factory Digestibility and palatability Energy value of poultry feeds Various feeding systems. Proteins and amino acids. Carbohydrates in the poultry

ration. Fats in the poultry ration. Fiber in the poultry ration. Minerals in the poultry ration. Perosis, or "slipped tendon." Vitamins in poultry nutrition. Vitamin A. Vitamin B-G complex. Vitamin "C. Vitamin "D. Vitamin "E. Riboflavin (previously known as vitamin G) Pantothenic acid. Biotin. Chick gizzard factor The anti-hemorrhagic vitamin (vitamin K) Nutritional encephalomalacia, or crazy chick disorder. Nutrition of turkeys. Nutrition of ducks. Nutrition of game birds. Hormones. Dietary control of coccidiosis. Poisons and feeds. Poultry nutrition terminology Official definitions of poultry feedstuffs. Vitamin determinations and chemical analyses. Formulating poultry mashes. Analyses and conversion tables. Recommended nutrient allowances for poultry Miscellaneous. Index.

Note (3015) This standard work was formerly published under the title *Handbook of poultry nutrition*. It is comprehensive digest and summary of the literature relevant to poultry nutrition which has appeared as government documents, articles in poultry and feed journals, and in the proceedings of societies and congresses. Citations are given to the original publications, and the total number of references is more than 1500. The present edition has been extensively revised in order to incorporate the literature published since 1943. It is about 130 pages longer than the second edition.

HARTMAN ROLAND C, AND G S VICKERS

Hatchery management. Revised and reset. Illustrated. New York Orange Judd Publishing Company, Inc. 1947 404 p illus 23 cm. $4 00 2484

Contents: History of mammoth incubation. Commercial hatching in America. Establishing the hatchery The hatchery plant. Equipping the hatchery The egg supply Flock improvement. Crossbred chicks. Getting hatchable eggs. Incubation practices. Hatchery sanitation. Getting the chicks to the customer The battery brooder Chick sexing Some management problems. Chick prices and hatchery costs. Baby chick shows. Planning the advertising program. Appeals that sell chicks. Building the advertisement Mail advertising. Outdoor advertising. Window displays Personal selling methods Other forms of advertising. Good will builders. Selling feed and supplies Handling adjustments Hatchery records Fair trade practices. Know your business. Bibliography Index

Note (3034) A manual of large-scale hatchery management as it is done by the more successful managers of hatcheries in the United States at the present time. Both the management of incubators and the marketing of chicks are covered. I this edition the book has been extensively revised, and the type has been reset. The new material includes information on flock improvement methods, new material on the control of incubation and the management of incubators, the sorting of newly hatched chicks by sexes, and on fair trade practices. The bibliography has been extended to include articles and pamphlets published since 1933

HEUSER, GUSTAVE FREDERICK

Feeding poultry New York John Wiley & Sons Inc. 1946 543 p illus. 23 cm. (Poultry science series edited by James E. Rice) $5.00 2485

Contents The feeding problem Objects and principles in feeding poultry Composition of plants and animals Digestion and metabolism Measuring the usefulness or value of feeds. Poultry feeds—grain and mash constituents Poultry feeds—animal proteins Vegetable protein feeds Necessity for and use of animal protein. Green feed. Factors to consider in making poultry rations. Feeding systems and practices Health feeding. Feeding and management of young chickens. Feeding and management for egg production. Feeding and management of breeders. Fattening or finishing of poultry Feeding turkeys. Feeding waterfowl Feeding other species of birds Economics of feeding. Index.

Note A monographic survey based mainly on the published literature. It is designed primarily for advanced students, but it is valuable also to feed manufacturers and to farmers who raise poultry on large scale. Lists of references, some of them running to more than hundred citations, are appended to the chapters Exact details of many tested rations are given The author is Professor of Poultry Husbandry at the New York State College of Agriculture.

HOFFMANN EDMUND AND HUGH A. JOHNSON

Successful broiler growing. Mount Morris, Ill. Watt Publishing Company (Greenberg Publisher 201 E. 57 St., New York 22 N Y., distributors to the trade) 1946 186 p illus. 22 cm $3.00 2486

Contents: Introduction. Producing and consuming areas. Outlook for poultry meat production. Breeds and strains. Housing. Feeding principles and practice. Brooding and management. Disease prevention and control. Marketing. Home killing and dressing broilers. Investment, financing, expenses and returns. Broiler production in batteries. Breeding for meat production. Producing eggs for hatching broiler chicks. Appendix References of interest to broiler growers. Agricultural colleges and experiment stations in the U. S. and Canada. Index.

Note The production of chicken meat for broiling and frying is the subject of this text intended for new poultrymen, for experienced poultrymen, for high school classes, and as practical reference in agricultural college courses. The book is "a blending of personal observation by the authors, recording of the practices used by successful growers, and reporting of the available research concerning poultry meat production.

IVES PAUL POMEROY

Domestic geese and ducks, a complete and authentic handbook and guide for breeders, growers and admirers of domestic geese and ducks. Illustrated by Franklane L. Sewell and Arthur O Schilling and others. New York Orange Judd Publishing Company Inc., 1947 372 p illus 22 cm. $3.50 2487

Contents (abridged) Part One, Geese History habits, tradition and general possibilities in geese. Breeds of geese. Selecting for breeding. Hatching and rearing. Fattening geese. Exhibiting geese. Marketing. "Geese must have grass. Part Two, Ducks: General nature various types, adaptability of different breeds. Breeds of ducks. Breeding ducks. Hatching. Feeding. Marketing. Establishing duck farm. Exhibiting ducks. Diseases of ducks. Sexing day old ducklings. Ten favorite recipes for preparing duck. Index. Part One, Geese Part Two, Ducks.

Note. The subtitle of this volume is an accurate description of its purpose. The book is suited both to the large-scale breeder and to the householder or farmer who desires to raise geese and ducks on small scale. Considerable material is included on the histories of the breeds.

JULL, MORLEY ALLAN

Raising turkeys ducks geese, game birds. New York McGraw Hill Book Company Inc., 1947 467 p illus 23 cm. $4 00 2488

Contents: Part I, Raising turkeys: Keeping good turkey stock. Breeding for efficient turkey production. Renewing the turkey flock. Brooding and rearing turkey poults Feeding breeders and turkey poults. Controlling parasites and diseases of turkeys. Marketing turkeys Making success of the turkey enterprise. Part II, Raising ducks, geese game birds, and other birds: Raising and marketing ducks. Raising and marketing geese. Raising guineas, pigeons, and peafowl Raising and conserving game birds. Appendix. Index.

Note: Written by well-known authority on poultry raising, the book gives practical and specific information on all phases of the production and marketing of turkeys. Ducks, geese, guineas, pigeons and peafowl are discussed in less detail but the information given is adequate to the needs of the average grower. Notes on the nature and habits of pheasants, quail, partridges, grouse, prairie chickens and wild turkey are included as an aid to their propagation and conservation; and techniques which have been found successful in raising them are described. The control of diseases and parasites is covered and ways in which the farmer can participate in game conservation. The appendix contains list of sources of government publications, names of federal and state organizations concerned with wildlife protection in the United States and Canada, and bibliography of documents, books, and periodicals.

KLEIN GAY T

Starting right with poultry, edited by Ed Robinson New York The Macmillan Company 1947 177 p illus 22 cm. $2 75 2489

Contents Should you keep flock of chickens? The poultry house and its furniture. Selecting breed and getting start. Brooding chickens. Feeding layers. Raising broilers, roasters, and capons. Keeping the flock healthy How to pick the layers. Other poultry problems. Preparation and preservation of poultry and eggs.

If you want to expand. Flock records. Poultry cooking. Ways to serve eggs. Index.

Note: A simplified presentation aimed at persons interested in poultry raising on a small scale. It does not compare in subject coverage or range of detail with full-size introductory texts, but it does describe modern methods and equipment. The author is an outstanding authority on poultry and a member of the faculty of Massachusetts State College. The book is part of an unnumbered series entitled *The "have-more" plan reference library*, of which the key volume is Ed Robinson and C. Robinson, *The "have-more" plan*, New York, 1947 (see Index)

KLEIN GAY T

Starting right with turkeys, edited by Ed Robinson. New York The Macmillan Company 1946 129 p illus. 22 cm. $2 75 2490

Contents: Is the small turkey project practical? Selecting breed and getting a start. Brooding your turkeys. Brooding poults. The turkeys grow up. Keeping the flock healthy. Producing your own poults. Killing and dressing. Preservation of turkeys. Records and schedules of work. If you want to expand. Ways to cook turkeys. Index.

Note. This book is similar in purpose and scope, and is part of the same series as the author's *Starting right with poultry* described above.

LIPPINCOTT WILLIAM ADAMS

Poultry production. Seventh edition, thoroughly revised by Leslie E Card. Philadelphia Lea & Febiger 1946 440 p illus. (part col d) 23 cm. $4.00 2491

Contents: The poultry industry. The breeds of chickens. The structure of the chicken and the formation of the egg. Principles of poultry breeding. Selection and improvement. Incubation. Brooding and rearing. Houses and equipment. The principles of poultry nutrition. The feeds. The nutrient requirements of poultry. Management practices. Controlling diseases and parasites. Marketing poultry products. The business of poultry keeping. Index.

Note: (3043) A long established text widely used in agricultural college courses and to a lesser extent by practical poultry farmers. It is outstanding for its comprehensiveness and for its generous citations of related literature. Economic information is also a prominent feature. This edition represents a major revision. Several chapters have been rewritten, one chapter added, and the remaining text has been revised. The type was reset and the book given a more attractive format.

MARSDEN, STANLEY J., AND JOSEPH HOLMES MARTIN

Turkey management. Fourth edition. Danville, Ill. The Interstate, 1946 773 p. illus. 22 cm. $4.50 2492

Contents (abridged): The turkey's place in American agriculture. Classification, origin, and history. Teratology and variation. Characteristics, management, and feeding of breeding stock. Trapnesting and pedigreeing. Artificial incubation. Artificial brooding and rearing. Turkey feeds and feeding. Marketing, selection and grades. Malformations and bad habits. Disease prevention and sanitation. Diagnosis and control of diseases and parasites. Caponizing, sexing and artificial insemination. Appendices: Weight conversion table. Drawing and trussing. Cooking. Periodicals. Natural incubation. National Turkey Improvement Plan. Emergency rations. Egg-weight conversion data. Digestibility of feedstuffs. Feed consumption of turkeys. Equipment plan for catching and sorting breeding stock. Feed hopper and storage bin plans. State disease diagnostic laboratories. Index.

Note: A practical manual which summarizes the results of scientific research in the field of turkey raising, states in terms understandable to the layman the results of experiments, and presents recommendations for practical procedures. The book contains 140 photographs and other illustrations and lists of bibliographical references. A new edition was scheduled for publication in 1949

SEIDEN, RUDOLPH editor

Poultry handbook an encyclopedia for good management of all poultry breeds. New York D Van Nostrand Company Inc. 1947 410 p. illus. 24 cm. $4 95 2493

Note: A collection of information useful in the management of poultry. Definitions of terms and brief discussions of specific topics are arranged in one alphabet with abundant cross-references. Many subjects are discussed but material on production and treatment of diseases predominates. Enough information is given under most headings to serve the needs of county agents and practical farmers and, in addition, references are given to the original articles and bulletins.

FUR ANIMALS

ASHBROOK, FRANK GETZ

Fur farming for profit. Revised and reset. New York Orange Judd Publishing Company Inc. 1948 429 p illus. 22 cm. $4 00 2494

Contents: History and development of fur farming. Fur farming areas. Advice to beginners. Selecting a fur farming site. Essentials of breeding. Essentials of feeding. General management of the fur farm. Prevention and treatment of disease. Fox farming. Mink farming. Raising other fur animals. Transporting live animals. Pelting. Marketing furs. Associations and co-operatives. Fur animal exhibitions. Index.

Note: A general introductory presentation of the subject for students in agricultural colleges, persons who are considering fur farming as a business, and established fur farmers. The chapter "Raising other fur animals" discusses the fur animals (other than fox and mink) that apparently can be raised profitably under present conditions and also those, such as skunk, that thrive in captivity but do not return a profit. Throughout the book emphasis is placed on practical methods that have proved profitable. The first edition was published in 1928; in the present edition the book has been very extensively rewritten and now discusses such new developments as mutation minks.

BACHRACH, MAX

Fur a practical treatise. Revised edition. New York Prentice-Hall, Inc. 1946. 672 p. illus 24 cm. $7.50 2495

Contents (abridged): Part I, Geography of the fur world. Part II, Physical properties of peltries: Skin and hair structure. Assorting peltries. General classification of mammals. Water rodents. The land rodents. The cat family (Felidae) Dog family (Canidae) Bear raccoon groups. Weasel family (Mustelidae) Marsupials or pouched animals (Marsupialia) Hoofed animals (Ungulata) Miscellaneous peltries—fur seal, hair seal tropical seal; mole; monkey. Part III, Marketing: Fur farming. Buying and collecting peltries. Dressing, dyeing, and bleaching. Care and handling of furs. Microscopy. Appendix: Nomenclature of fur peltries. Bibliography. Index.

Note. This comprehensive work is written for the guidance of fur dealers, fur breeders, and others who are connected with the fur industry. All furs of commercial importance are described under the following headings: natural history and habitat of the animal from which the fur is obtained; uses, characteristics, special qualities, grades and other merchandising details. Of particular value is the collection of microphotographs of the longitudinal sections of various fur fibers. In this revision the scope and general arrangement of the previous edition have been retained. However some chapters, such as those dealing with the dog family and hoofed animals, have been revised to include new material on platinum silver fox, white-mark silver fox, brown persians, and Indian lambs. A section on Federal Trade Commission rules has been added to the appendix, and the ten-page bibliography brought up to date.

FISH CULTURE

DAVIS HERBERT SPENCER

Care and diseases of trout. Revised edition 1946 Washington, D C. Government Printing Office, 1946 98 p. illus. 23 cm. (United States. Fish and Wildlife Service. Research report no 12) Paper $0.35 2496

Contents: Introduction. Care of fingerling trout. Care of ponds and raceways. Trout feeds. Feeding methods. Improvement of stock. Parasites and diseases: General considerations. General principles of disease control. Sterilization of ponds and raceways. External animal parasites. Internal animal parasites. Bacterial diseases. Miscellaneous diseases. Literature cited.

Note (1943) The third and most extensive revision of this publication, which is intended for reference and guidance of persons operating trout hatcheries. The work covers the general care of the trout, their ponds and raceways. Trout foods and methods of feeding are discussed, with special attention to the use of dry products for supplementing fresh meat in the diet. Improvement of stock by selective breeding is given consideration. The section on parasites and diseases covers seventy pages and includes detailed account of each disease, including the characteristic symptoms, etiology pathology and methods of control. The figures include drawings and photomicrographs of the more important organisms that cause trout diseases and their effects on the tissues. The bibliography is five-and-one-half pages in length.

DAVISON, VERNE ELBERT

Farm fishponds for food and good land use. Washington D C. Government Printing Office 1947 29 p illus. 23 cm. (United States Department of Agriculture. Farmers' bulletin 1983) Paper $0 10 2497

Contents: Introduction. Management of fishponds Laws. How to stock pond with fish. Fertilizing. Weed control. Fishing. Draining the pond. How to build good pond Choosing location. Clearing the site. Installing overflow and drain pipes. Building the dam. The flood spillway Deepening the edges. Diking the shallow end. The finished pond. Protecting the pond from erosion. Old ponds and small lakes.

Note Superseding *Farmers' bulletin* no. 1938, this bulletin points out that, when suitable site for farm pond exists, properly developed and managed pond may provide both food and pleasure to the farm family. It is intended for those who wish lasting pond which may be fished many times year. It tells how to select site, how to build the pond, and how to insure rapid production of an ample supply of fish.

DOBIE, J R. AND OTHERS

Propagation of minnows and other bait species, by J R. Dobie O L Meehean and G N Washburn. Washington D C. Government Printing Office 1948 113 p illus 23 cm. (United States. Fish and Wildlife Service. Circular 12) Paper $0.35 2498

Contents: Introduction. Propagation of bait species. The minnow pond. Selection of species. Operation of the minnow pond. Special considerations in the propagation of suckers. Disease and parasite control. Control of predation. Handling of minnows and operation of holding tanks. Causes of loss. Reduction of loss. Sources of materials and equipment. Earthworms, crayfish, and crickets. Leeches and insect larvae. Life histories of important bait fishes. Northern creek chub. Northern pearl dace. Horny-headed chub. River chub. Western black-nosed dace. *Fine-scaled* dace. Northern red-bellied dace Southern red-bellied dace. Western golden shiner Lake emerald shiner Northern common shiner Spottail shiner Bronzy minnow Fat-headed minnow Blunt-nosed minnow Central stone-roller Common sucker. Northern black bullhead. Stone catfish. Western mud minnow Bibliography

Note This bulletin is summary of available information of bait culture and is intended as guide for those interested in raising minnows and other bait species as commercial venture. Brief life histories and photographic illustrations are given of the principal bait fishes.

EDMINSTER FRANK CUSTER

Fish ponds for the farm. New York Charles Scribner's Sons 1947 114 p illus. *26 cm. $3 50* 2499

Contents Fish ponds yesterday and today Location of the pond. Building the pond. Landscaping the pond area. Preparing old ponds for fish management Some fundamental biologic facts and principles. Developing good fishing. The fish harvest and pond maintenance.

Note An inclusive, practical manual on the building and management of small ponds for the raising of fish for food It is generously illustrated with diagrams and charts and with numerous photographs hich show both pond building operations and completed ponds.

WALFORD LIONEL ALBERT, editor

Fishery resources of the United States. Illustrated by Katherine Howe. Washington, D C Public Affairs Press 1947 134 p illus. (part col d) 30 cm. $5.00 2500

Contents (abridged) The fishery resources of the United States and its territories. Pacific fishery resources Salmons. Sardines. Mackerels. Herring. Halibut. Anchovies. Clams. Crabs. The fur seal resource (*Callorhinus ursinus cynocephalus*) World fishery resources Tunas. Atlantic fishery resources Groundfishes (in general). Haddock (*Melanogrammus aeglefinus*) Cod (*Gadus callarias*) Whiting (Merluccius bilinearis) Halibut (Hippoglossus hippoglossus) Herring (Clupea harengus) Mackerels. Salmon (Salmo salar) Alewives. Shad (Alosa sapidissima) Menhaden (Brevoortia tyrannus) Sea-fishes Weakfish (Cynoscion regalis) Striped bass (Roccus saxatilis) Pompano (Trachinotus spp) Bluefish (Pomatomus saltatrix) Tarpon (Tarpon atlanticus) Reptiles and amphibians. Diamond-back terrapins (Malaclemys spp.) Crustaceans. Lobster (Homarus americanus) Crabs. Mollusks: Soft-shelled clam (Mya arenaria) Hard-shelled clam (Mercenaria mercenaria) Scallops. Mussels (Mytilus edulis) Oysters. Fresh water fishery resources: Brook trout (Salvelinus fontinalis) Rainbow trout (Salmo irideus) Lake trout (Cristivomer namaycush) Rock bass (Ambloplites rupestris) Muskellunge (Esox masquinongy) Great Lakes fishery resources. Pond fish culture. Sponges. Seaweeds. Fishery resources of Puerto Rico and the Virgin Islands. Fishery resources of Hawaii. Water utilization and the fisheries. Economics of United States fisheries. Index.

Note An authoritative volume of facts and figures for the general or special reader interested in salt-water and fresh-water fish and in the conservation of fishery resources. The discussions of specific varieties of fish usually cover distribution, life habits, fishing methods, market preparation uses, and the annual production of fish in pounds. The material is presented largely from the standpoints of the economic importance and the need for planned conservation efforts. The volume is profusely illustrated with informal although anatomically correct drawings of the various food and game fishes, maps showing their geographic ranges, and diagrams indicating commercial fishing techniques.

VETERINARY MEDICINE

BENBROOK EDWARD ANTONY

List of parasites of domesticated animals in North America. Revised edition Minneapolis, Minn. Burgess Publishing Co 1946. 53 p. 27 cm. Spiral binding $1 50 2501

Contents Respiratory system. Alimentary system. Urinary system. Genital system. Blood and blood vessels. Lymphatic system. Muscles. Connective tissues, subcutis and joints. Eye, ear central nervous system. Skin.

Note A useful supplement for courses in veterinary parasitology. Parasites are listed according to their location in the body of the host. For each parasite or parasite group the following information is given the scientific specific name, common name, taxonomy location in host, the known hosts, and size of the parasite in millimeters or microns. The entries are cross-referenced.

BENBROOK EDWARD ANTONY, AND MARGARET W SLOSS

Veterinary clinical parasitology Ames, Iowa The Iowa State College Press 1948. 187 p illus. 24 cm. $4.50 2502

Contents Fecal examination in the diagnosis of parasitism. Skin examination for evidence of parasitic infestation. The diagnosis of the infestations. References. Index.

Note A practical manual written to assist veterinarians in making an accurate diagnosis of parasitic disease in domestic animals. The clear and concise description of suitable laboratory techniques and methods of identification is supplemented by numerous photomicrographs showing the ova, oocysts, sporocysts, and larvae of the various parasites as well as some adult specimens. A twenty-page bibliography is included.

COFFIN DAVID LUKENS

Manual of veterinary clinical pathology Revised and amplified. Ithaca, N Y Com-

stock Publishing Company Inc., 1945 263 p. illus. 24 cm. $4.00 2503

Contents Microscopic technique for clinical pathologic examinations. How to collect, pack and ship specimens for laboratory diagnosis. Parasitologic examinations. Urine examinations. Interpretation of urinary findings. Hematology Interpretation of hematologic findings. Diagnostic methods in bacterial disease. Diagnosis of bacterial diseases. Diagnosis of mycotic diseases. Diagnosis of protozoan blood diseases Diagnosis of protozoan genital infection. Diagnostic methods in virus diseases. Fertility examinations. Poultry and game-bird autopsy Formulas and techniques. Index.

Note: A concise presentation intended for use by both students of veterinary medicine and practicing veterinarians. It deals chiefly with microscopic and other office and laboratory techniques that may be used as aids in diagnosis. Step-by-step directions are included for collecting specimens and performing autopsies. These are directed particularly to veterinarians and to students who have not had previous training in laboratory procedures. The directions for laboratory procedures also are explicit and detailed. Special procedures that are valuable only in research work are indicated by smaller type. A table entitled "Data for differentiation of disease-producing bacteria in domestic animals" occupies twenty-seven pages and furnishes wide range of information. Lists of related literature are appended to the chapters. The first edition was published by the author in 1944.

DUKES HENRY HUGH AND OTHERS

The physiology of domestic animals with a chapter on the physicochemical basis of physiological phenomena, by E A. Hewitt, and a part on the endocrine organs reproduction, and growth, by S A Asdell. Sixth edition. Ithaca, N Y Comstock Publishing Company Inc. 1947 817 p. illus. 23 cm. $7.50 2504

Contents (abridged) Part I, Introductory; the circulating fluids of the body: The physicochemical basis of physiological phenomena. Blood. Lymph, cerebrospinal fluid; synovial fluid. Part II, The circulation of the blood. Part III, Respiration The mechanics of respiration. The regulation of respiration; respiration in birds Part IV Digestion and absorption. Prehension, mastication, salivary secretion, deglutition. The simple stomach. The ruminant stomach. The small intestine. The large intestine Intestinal movements. Absorption. Part The kidneys and urine the skin. Part VI, Metabolism and heat regulation; Protein metabolism. Fat metabolism Carbohydrate metabolism. Minerals, water and vitamins in metabolism, Part VII, Muscular activity and the nervous system. Part VIII, The special senses: Vision. Hearing, smell, and taste. Part IX, The endocrine organs, reproduction, and growth. Index.

Note: (1817) A comprehensive review of current knowledge, designed primarily as textbook for students of veterinary medicine, but useful also to students of animal husbandry and to practicing veterinarians Physiologic phenomena are treated generally but significant variations among domestic animals are described concisely Each section is accompanied by bibliography of the related literature. It has been standard work since the publication of the first edition in 1933 Compared to the fifth edition (1942) this one exhibits many revisions and additions, most of them based on new knowledge gained during the war years.

ENGLE, EARL THERON, editor

The problem of fertility proceedings of the Conference on Fertility held under the auspices of the National Committee on Maternal Health. Princeton, N J Princeton University Press, 1946 254 p. illus 22 cm. $3 75 2505

Contents: Patterns of estrous cycles, by S. A. Asdell. Ovulation and estrus in sheep and goats, by R. W Phillips, R. M. Fraps, and A. H. Frank Induction of ovulation and subsequent fertility in domestic animals, by L. E. Casida. The induction of ovulation in domestic animals, by J. Hammond The ovary at the time of ovulation, by G. W Corner. Hormonal control of ovulation, by H. H. Cole. Cervical mucus and the menstrual cycle, by W T Pommerenke and Ellenmae Viergiver. Spermatozoa and cervical mucus, by A. R. Abarbanel. Glycolysis, livability and fertility of bovine spermatozoa, by G. W Salisbury Metabolism and motility of human spermatozoa, by J. Macleod. Fertilizing capacity of rabbit spermatozoa, by M. C. Chang. History of equine spermatozoa, by V R. Berliner. Artificial insemination of dairy cattle, by J. W Bartlett. The cervix uteri in sterile matings, by F A. Simmons. The effect of synthetic thyroprotein on sterility in bulls, by E. P Reineke. Methods for determining the time of ovulation in domestic animals, by J Hammond. List of members of the Conference on Fertility

Note: The papers and discussions presented in this volume provide an overall picture of the present status of research concerning the patterns of reproduction in mammals. Although various aspects of human fertilization are discussed, the majority of the papers deal with the processes of reproduction in domestic animals. For this reason the book will be of interest to professional animal breeders as well as to biologists and physicians. Several of the papers include extensive bibliographies.

FOUST HARRY LEWIS AND R. GETTY

Atlas and dissection guide for the study of the anatomy of domestic animals Second edition. Ames Iowa The Iowa State College Press, 1947 84 p. illus. 30 cm. $2.50 2506

Note: (3074) Dissection of the head and neck, thorax and thoracic limb, abdomen, pelvic region and pelvic limb, are covered for the dog, horse, cow, pig, cock, and hen in thirty-four plates of generous size. In addition to the plates and their accompanying pages of nomenclature, there are sixteen pages of text devoted to explanatory notes and questions, dissecting hints for beginners, and references. The volume is designed as laboratory manual for students of veterinary anatomy

FRANK, EDWARD RAYMOND

Veterinary surgery notes. Revised edition. Minneapolis Minn Burgess Publishing Company 1947 272 p. illus. 29 cm. $5.00 2507

Contents: Anesthesia. Surgical technic. Restraint. Fractures and dislocations. Wounds and their treatment. Neoplasms and cysts. Affections of the head and neck. Affections of the shoulder and front limb. Affections of the thoracic and abdominal cavities. Affections of the tail, anus, rectum, vagina and penis. Affections of the hind limb. Index.

Note: (3075) A useful manual of surgery on the larger farm animals. Procedures are described concisely but in sufficient details for practical use. The book is suitable for advanced students of veterinary science who have already studied anatomy histology and other basic sciences and for practicing veterinarians. There are 132 illustrations, most of which are reproduced from photographs; and there are references to additional literature on the various topics of the chapters. The book is reproduced from typewritten copy in order to make frequent revisions practical. This is the fourth edition and it contains, as did the previous revisions, minor but significant changes.

KELSER, RAYMOND ALEXANDER, AND HARRY W SCHOENING

Manual of veterinary bacteriology Fifth edition. Baltimore The Williams & Wilkins Company 1948 767 p. illus. 23 cm. $6.50 2508

Contents (abridged) Bacteria, their morphology, physiology and classification. Bacteriological methods. Infection and immunity Bacterial variation. Pathogenic organisms of the class Schizomycetes. Pathogenic fungi. The Protozoa. The filtrable viruses and Rickettsiae. Serology Hematology Preparation of veterinary biological products. Bacteriological examination of milk and water

Note. (3076) A reference manual and textbook devoted to the bacteria and related organisms which are of interest in veterinary medicine. The methods and techniques of bacteriological research are briefly discussed, but the greater part of the volume is devoted to descriptions of specific organisms, their occurrence, diseases which they produce, morphology staining characteristics, and methods of culture. In this edition the chapters dealing with Protozoa, organisms of the genera Brucella, Streptococcus and Staphylococcus, and staining methods have been revised. The work is designed for students and research workers in veterinary science, and for practicing veterinarians.

FORESTRY

BOERKER, RICHARD HANS DOUAI

Behold our green mansions a book about American forests with photographs and maps. Chapel Hill The University of North Carolina Press, 1945 313 p illus. 24 cm. $4 00 2518

Contents: What is conservation? Forest resources of the United States. Recreation for the people. Relation of forests to wild life. Forests and the water supply Holding the soil. Forests and flood control. Lumber and its by-products. The forest as livestock range. Forestry and agriculture. Fire, the destroyer Insect enemies. Tree diseases and forest sanitation. Leadership of the Federal government. Progress of the states in forest restoration. Forestry problems in the South. Community forests. Economic factors in private forestry Index.

Note The author has presented here with considerable success picture of the history of American timber resources and of their very closely integrated role with other phases of our social and economic structure. Although the steps taken by the Federal government in the past several decades are recognized as valuable, there is implicit throughout the text the need for a far more effective kind of forest control,—an active, national program, geared to future needs, rather than the mere protection of existing stocks. The questions involved in public ownership of forest lands are treated somewhat indirectly with careful avoidance of the larger controversial aspects. The numerous photographs are excellent there are also diagrams and occasional bibliographic footnotes.

BOYCE, JOHN SHAW

Forest pathology Second edition. New York McGraw-Hill Book Company Inc., 1948 550 p illus. 23 cm. (The American forestry series Walter Mulford consulting editor) $6 00 2519

Contents: Introduction. Disease. The fungi. Noninfectious diseases. Seedling diseases Root diseases. Foliage diseases of hardwoods, Foliage diseases of conifers. Stem diseases Rusts of conifers, cankers of conifers, cankers of hardwoods, galls, witches'-brooms, and fasciations, diebacks and wilts. Stem diseases caused by mistletoes, dwarf mistletoes, lichens, and climbers. Stem diseases: decay The rots. Deterioration of dead timber Deterioration of forest products: Decay sap stains Principles of forest-disease control. Appendices: Fungicides. List of common names of plants used with scientific equivalents Index

Note (5094) A comprehensive description of the various diseases which attack forest trees of the United States and Canada and of the methods employed in their control. The book is intended for use as college text and reference manual, and is based on courses given at Yale University No attempt is made to deal with culture methods and other pathological techniques. The general scope and arrangement of this edition remain the same as in the earlier volume, but the material has been revised to incorporate developments which have occurred since 1938. Such diseases as phymatotrichum root rot, septoria canker of poplars, oak wilt, and mimosa wilt, are now discussed, and the chapter bibliographies have been brought up to date.

BUELL JESSE H.

The prediction of growth in uneven-aged timber stands on the basis of diameter distributions. Durham N C Duke University School of Forestry 1945 70 p. illus. 23 cm. (Duke University School of Forestry Bulletin 11) Paper $0 75 2520

Contents (abridged) Introduction The problem of growth in uneven-aged stands. Previous work on the problem. Objectives and scope of study Collection and preparation of data: Nature of data collected. Computation of volume growth on plots. Analysis of data: The equation form. The final growth equations. Methods of using the equations. Discussion of results: Usefulness in forest management. Ecological and silvical implications. Summary Appendices. Literature cited.

Note The modern forester is called upon to quantitatively predict the board-foot increase that can be expected in given forest over definite period. The problem of determining future yield is relatively simple one in timber stands of the same species and age, but for stands containing uneven-aged trees of different species it is complex. The present paper describes method developed by the author for accurately estimating future timber crops from such stands. The work is directed at professional foresters.

COILE, THEODORE STANLEY

Relation of soil characteristics to site index of loblolly and shortleaf pines in the Lower Piedmont region of North Carolina. Durham, N C Duke University School of Forestry, 1948 78 p illus. 23 cm. (Duke University School of Forestry Bulletin 13) $0 75 2521

Contents (abridged) Climate, forests, and soils of the region. Previous work. Collection of field data. Determination of site index. Quantitative measurement of subsoil characteristics. Preliminary analysis of data. Significance of topographic position. Final analysis of data. Discussion of results. Summary and conclusions. Literature cited.

Note. The ability to estimate the quality and productive capacity of land for forest crops is of considerable importance to the pulp and paper industry and in reforestation programs. This monograph reports on study which was carried out for the purpose of making such an estimate through an examination of soil characteristics and the topography of the land in question. Although the study is limited to relatively small area, the methods described have wide application.

HAWLEY, RALPH CHIPMAN

The practice of silviculture. Fifth edition. New York John Wiley & Sons Inc., 1946. 354 p illus. 23 cm. $4.00 2522

Contents General considerations. Reproduction methods—treatment of the stand during the period of regeneration or establishment. The clearcutting method. Clearcutting with natural regeneration. The seed-tree method. The shelterwood method. The selection method. The coppice method. The coppice-with-standards method. Intermediate cuttings—treatment of the stand during that portion of the rotation not included in the period of regeneration. Thinnings. Improvement and salvage cuttings. Pruning. Methods of controlling cuttings. Slash disposal. In conclusion. Appendix: Common and technical names of tree species mentioned in the text. Index.

Note. (3103) Some of the problems of forestry past accomplishments and some of its projected uses are mentioned; the economics of growing timber for profit is discussed, and several comparisons are made of United States and European forests. This book is long-established text in the United States of America. Practical methods are clearly described in considerable detail, hence the book should be as useful to persons directly concerned with the management of timber stands as it is to forestry students. Advances in practice since the previous edition (1937) have been incorporated in this revision and references at the end of the chapters have been brought up to date.

HAWLEY RALPH CHIPMAN, AND PAUL W STICKEL

Forest protection. Second edition. New York John Wiley & Sons Inc., 1948. 355 p. 24 cm. $4.50 2523

Contents (abridged) Man as a source of injury to the forest. Forest fires. Fire prevention. Presuppression activities in fire control: detection—communication, transportation and firebreaks—equipment and personnel—fuel reduction and fuel mapping—fire-danger rating—fire-control policy and objectives. Fire suppression. Forest fire insurance. Protection against injurious plants. Protection against insects. Protection against domestic animals. Protection against wildlife. Protection against atmospheric agencies. Appendix. Author index. Subject index.

Note: (J101) A general treatment of the agencies that are injurious to forests. Each agency is described as to economic significance, nature and extent of the injury to the forest, and the methods of control. Although the authors have not attempted a comprehensive manual of control methods, they do mention the main details of most techniques and supply references to literature in which fuller discussions may be found. The book is used chiefly as a college text. In addition to routine re-writing to take care of recent developments in the field, this edition is characterized by rather extensive rearrangement of topics in sequence, inclusion of recent references in the chapter bibliographies, and a considerably expanded and more efficient topical index.

JOINT COMMITTEE ON FORESTRY OF THE NATIONAL RESEARCH COUNCIL AND THE SOCIETY OF AMERICAN FORESTERS

Problems and progress of forestry in the United States. Washington, D C. Society of American Foresters, 1947 112 p. 25 cm. $1 75 2524

Contents (abridged) Part I, The forest situation in the United States American forests today Effect of war on American forests. Forests of Alaska. Forest ownership. The field of wood utilization, by G. A. Garratt. Part II, Public responsibilities and action in forestry: National aspects of the forest problem. National forests. National parks. Other federal forests. Organization of federal activities in forestry State forests. Part III, Problems of private forestry: Factors retarding practice of forestry by private owners in the Pacific Northwest, by T T Munger Forestry in the southern region, by I. F Eldredge. Part IV Public action in advancing private forestry: Public cooperative activities in forestry Forest protection. Wildlife conservation. Range management and forest pasturage. Forest taxation. Forest fire insurance and credits Public regulation of cutting on private forests. Part V Education and research in forestry: Forestry education. Postwar employment of foresters. What kind of students should be admitted to professional forestry curricula? by H. Schmitz. Research in forestry Summary of recommendations.

Note: The above committee was organized in 1943 with the threefold purpose of studying the present forest situation in the United States, reviewing the activities and accomplishments of various branches of forestry and determining what problems are already being met by existing forest agencies. The present volume is a report of the committee's findings and recommendations. The information is intended for professional foresters, timber owners, educators, and conservation officials.

LILLARD RICHARD GORDON

The great forest. New York Alfred A. Knopf 1947 399 p illus. 24 cm. $5.00 2525

Contents (abridged) The backwoods system. Hunting in the wilderness. Cabin in the clearing Fever and fire. Subsidy for independence. Harvest for progress. Baronies in the making. Lumberjack, riverhog, and raftsmen. Crusade for conservation. Protest from labor Forest in the machine age. Sylvan heritage. Appendices. Sources of principal quotations. Bibliography Index.

Note Of paramount interest to foresters, timber owners and conservationists, this interesting study contains much for the student of American economic and social history as well as for general readers. In skillful prose the author presents the story of the forest in the United States, not as an isolated unit but as a primary influence through three centuries in shaping the American way of life. Careful consideration is given the impact of the forest on colonial personality (development of the "frontier type") on American war and peace, on economics and agriculture, and especially on capital and labor so that the pageant of the country's history is seen to center around its timber resources. Illustrations are well chosen and numerous, and supplementary and bibliographical material extensive.

LUTZ, HAROLD JOHN AND ROBERT F CHANDLER, JR.

Forest soils. New York John Wiley & Sons, Inc. 1946 514 p illus. 22 cm. $5.25 2526

Contents: Introductory Soil-forming minerals. Soil-forming rocks. Disintegration and decomposition of minerals and rocks. Forest-soil organisms. The organic matter of forest soils. Nature and properties of soil colloids. General physical properties of forest soils. The water relations of soils, particularly forest soils. General chemical properties of forest soils. Soil formation. Forest soil classification. Soil erosion and forest-soil deterioration. Appendix. Author index. Subject index.

Note: Essentially this work is a textbook for use in courses offered to forestry students. It provides rather detailed information on the formation, characteristics, and conservation of forest soils as distinguished from soils used for agriculture. It contains very extensive reference lists to which statements in the text are keyed; and it may therefore be used also as a survey guide to the literature of the subject.

SAND NORBERT H., AND MILTON M BRYAN editors

Managing the small forest. By Forest Service, Soil Conservation Service, and Extension Service. Washington, D C Government Printing Office, 1947 61 p illus. 23 cm. (United States. Department of Agriculture. Farmers' bulletin no 1989) Paper $0 15 2527

Contents: Introduction. Silviculture—growing and tending the forest: What a small forest should look like Helping the forest to grow Harvesting the timber crop. Perpetuating the forest. Planting trees: What trees to plant. Sow seeds or plant seedlings. Preparing to plant seedlings. Planting the seedlings. Protecting the small forest Fire. Disease. Insects Grazing damage. Other protection. Measuring the forest Integrated use. Measuring and grading sawlogs. Estimating standing timber Veneer logs. Poles and piling. Pulpwood. The Mine timbers Bolts and billets. Fuel wood. Cutting the timber crop Tools. Handling sawlogs. Cutting other timber products. Caring for timber products Selling forest products: Finding a market. Sales contracts. Cooperatives for selling timber. Sample timber sale agreement.

Note: The information in this publication is intended to provide the owner of the small forest with simple rules of good forest management so that his trees may be vigorous and productive.

SPURR, STEPHEN HOPKINS

Aerial photographs in forestry New York The Ronald Press Company 1948 340 p illus. 24 cm. $6.00 2528

Contents (abridged) Part I, Aerial photographs: Types of aerial photographs. Films, filters, and season of photography Scale and focal length. Obtaining and handling aerial photographs. Part II, Aerial surveying: Overcoming displacement by radial line triangulation Transfer of detail from single photographs. Stereoscopy Stereoscopic transfer of planimetric detail. Topographic mapping from aerial photographs. Part III, Photo-interpretation Techniques and principles of photo-interpretation. Tree species. Stand density and crown diameter. Tree heights. Part IV, Forestry applications: Forest mapping. Volume estimation from aerial photographs. Use of photographs in controlling ground inventory Index.

Note. A considerable amount of periodical literature on the applications of photogrammetric techniques to forestry has appeared, but this seems to be a pioneer book. It is mainly a digest and critical review of the literature which is cited in bibliographies appended to the chapters. It will be useful to advanced students of forestry and others interested in investigating and extending the present techniques, and to managers of large tracts of forests. The author is Assistant Professor of Forestry at Harvard University

TOUMEY, JAMES WILLIAM

Foundations of silviculture upon an ecological basis. Second edition, revised by Clar

ence F Korstian. New York John Wiley & Sons Inc., 1947 468 p illus. 24 cm. $5.00 2529

Contents Introduction—Definitions and generalities. Part I, Environment of forests: Solar radiation. Air temperature. Atmospheric moisture. Climate. Soil conditions. Soil moisture and its influence on forest vegetation. Physiographic conditions. Biotic factors Interaction of site factors. Part II, Influence of forests on their environment. Reaction of forest vegetation on its physical environment. Effect of forests on animal life particularly mankind. Part III, Forests: Form and life of forest trees. Differentiation and development of stands. Reproduction, growth, and yield of stands. Tolerance. Forest vegetational units and their classification. Origin and development of forest communities—forest succession. Appendix: Common and technical names of trees. Bibliography Index.

Note (3112) A comprehensive study of the distribution of forest vegetation in the United States and of the various causes which affect its existence and growth. The book is intended for use in college courses in silvics, and the treatment assumes prior knowledge of botany and plant physiology. This edition has been enlarged to include some of the more recent advances in forestry ecology and plant physiology. A few chapters have been rewritten, but the general scope and arrangement of the earlier edition have been retained. Approximately thirty references to articles and books published after the 1937 edition are cited in the 32-page bibliography

WAHLENBERG, WILLIAM GUSTAVUS

Longleaf pine its use ecology regeneration protection growth and management. Washington D C Charles Lathrop Pack Forestry Foundation, in cooperation with the Forest Service U.S Department of Agriculture 1946 429 p illus. 26 cm. $5 00 2530

Contents: Part I, Resources, uses, and properties of longleaf pine. Longleaf pine resources. Uses and properties. Part II, Ecology: Natural distribution. Role of fire in regeneration of longleaf pine. Part III Regeneration Seeds, seedbeds, and seedlings. Problems of natural reproduction. Artificial regeneration. Part IV Protection Protection from fire. Protection from insects, disease, animals, and climatic injuries Part Management Naval stores operation. Growth and yield of longleaf pine trees and stands. Management of longleaf pine forests. Appendices. Common names of longleaf pine. Some characteristic forms of the longleaf pine belt. Density rule for longleaf or shortleaf southern yellow pine. Strength of longleaf pine wood. Values of southern pines for piece products. Stand tables for second-growth longleaf pine in fully stocked stands. Diameter and height tables for second-growth longleaf pine in fully stocked stands. Volume tables for second growth longleaf pine. Normal growth and yield tables for second-growth longleaf pine. Special uses of longleaf pine lead. Glossary Bibliography Plates Index.

Note A monograph for timber growers and foresters. All aspects of longleaf pine silviculture are covered, with particular emphasis placed on cultivation of second growth trees. The volume is compilation and digest of the scattered literature on the subject together with original material from the author's long personal experience as professional forester in this region. The bibliography contains 617 entries.

WILDE, SERGIUS ALEXANDER

Forest soils and forest growth. Waltham, Mass. Chronica Botanica Co., 1946 241 p. illus 27 cm. (A new series of plant science books, Frans Verdoorn editor Vol. XVIII) $5 00 2531

Contents (abridged) Historical and introductory Genesis of forest soils. Genetic soil groups of the world: Upland soils. Hydromorphic and embryonic soils. Forest cover; its biological structure and its relation to environment. Physical properties of forest soils. Chemical properties of forest soils. Organisms of forest soils. Forest humus. Soil-forest types. Forest soil survey Soils and tree planting. Amelioration of forest soils. Silvicultural cuttings in relation to soils. Productivity of forest soil and forest management. Establishment of forest nurseries and control of nursery watering. Use of commercial fertilizers and lime in forest nurseries. Use of composts, liquid fertilizers, and green manure crops in forest nurseries. Adjustment of nursery soil fertility Control of parasitic organisms in soils of forest nurseries. References. Author index. Subject index.

Note An important contribution to this subject. In the author's own words, "I have aimed to interpret forest soils as carriers of definite floristic associations, as media for the growth of nursery stock or forest plantations, and as dynamic systems that react to different forms of silvicultural cutting. I also have made special effort to stress the importance of large genetic soil groups as natural acclimatizational units. The work is based on both the author's own researches and comprehensive survey of the literature. The list of references runs to fifteen pages of fine print.

FOREST PRODUCTS

ARIES ROBERT S

The pulping of southern New England hardwoods. New Haven, Conn Northeastern Wood Utilization Council, 1948 26 p 23 cm. (Northeastern Wood Utilization Council. Bulletin no 20) Paper $1 00 2532

Note: A brief review and summary of the results obtained when pulping tests were carried out on oak, beech, birch, maple, and hickory woods from southern New England. The neutral sulphite semi-chemical process was found to be most satisfactory for these woods, and especially suited to the preparation of corrugated paper board. The volume consists largely of tabulations of technical data regarding hardwood composition, digestion conditions for the various pulping methods, strength characteristics of pulps, process costs, and the New England pulpwood supply

BROWN, NELSON COURTLANDT

Lumber manufacture, conditioning grading, distribution, and use. New York John Wiley & Sons, Inc., 1947 344 p illus. 22 cm. $4.25 2533

Contents: History economics, and general considerations. The manufacture of lumber Conditioning by air seasoning and kiln drying. Remanufacture Grades and inspection. The small sawmill. Cost and price relationships. Merchandising, distribution, and use. Shipping and traffic. Export. Lumber trade associations. Index.

Note: A survey of the manufacture of lumber that may be used either as a text in schools of forestry or as a book of background information by persons engaged in the manufacture or sale of lumber. The economics of the industry and its technology are given almost equal emphasis. There is considerable resemblance to the author's earlier *The American lumber industry* (1923) but there is so much new material, and the older material that has been used has been so thoroughly revised, that this is fairly called a new work.

NORTHEASTERN WOOD UTILIZATION COUNCIL

Economies in seasoning. New Haven, Conn. Northeastern Wood Utilization Council, Inc., 1948 75 p illus. 23 cm. (Bulletin 23) Paper $2.00 2534

Contents: The costs of poor kiln drying, R. M. Carter. Fundamentals of wood seasoning, R. C. Rietz. Modern kiln design and equipment, J. B. Welch. Furnace-type lumber dry kilns, O. W. Torgeson. Kiln drying of turning squares and turned products, O. Baker. Chemical seasoning: its effectiveness and present status, W. K. Loughborough.

Note: The papers comprising this monograph were presented at conferences held in 1947 by the Northeast Kiln Drying Association, the New England Kiln Drying Association and the Northeastern Wood Utilization Council. Each paper was prepared by an authority in the field of lumber seasoning, and together they provide a brief survey of modern lumber seasoning techniques. The relative merits of each system and the equipment employed are discussed and described. There is no index.

NORTHEASTERN WOOD UTILIZATION COUNCIL

Extractives from northeastern woods. New Haven, Conn., 1946 62 p. 23 cm. (Northeastern Wood Utilization Council. Bulletin no 9) Paper $1.00 2535

Contents: America's need for essential oils, by P. C. Magnus. Extractives, a review of literature, by R. S. Aries. Commercial production in the Northeast, by A. H. Downey. The economic extraction of essential oils, by R. S. Aries. Appendices: Recent essential oil imports into the United States. List of American firms producing or dealing with essential oils.

Note: In this collection of papers the production of essential oils from twigs, brush, and other wood wastes is surveyed realistically. Information is given on the oils that are now in production, additional oils not produced in the northeastern U.S.A. but for which market exists; typical prices before World War II and at the end of World War II; economic data on production costs; and on the construction of extracting plants and operating them for the best yields. The papers are addressed to owners of private forests, and to persons who are considering entering the business of extracting oils.

NORTHEASTERN WOOD UTILIZATION COUNCIL

Lignin chemistry and utilization. Report of conference at New Haven, Conn., September 19, 1947 New Haven, Conn. Northeastern Wood Utilization Council, 1948 135 p illus. 23 cm. (Bulletin no 19) Paper $2.00 2536

Contents: The present chemistry of lignin, F. E. Brauns. Recent German work on lignin, E. Farber. Sulfite liquor lignin, its chemistry and applications, M. Rosen. Lignin from the sulfate pulp industry, A. Pollak. Soda lignin and its uses, G. H. Tomlinson, II. The use of lignin as a soil builder, R. S. Aries. Appendix: Rosenblad system for evaporation, C. Rosenblad.

Note. The commercial utilization of lignin, one of the chief constituents of the waste liquor produced in pulping processes and the preparation of wood yeast or alcohol, is still in the experimental stage. These papers provide a brief review of present-day knowledge regarding the chemistry of lignin and of the various methods which have been devised for its utilization. Each paper has been prepared by an expert in this particular field of research, and two of the papers include extensive lists of references. There is no index.

NORTHEASTERN WOOD UTILIZATION COUNCIL

Special treatments of wood. New Haven, Conn., 1947 103 p. illus. 23 cm. (Northeastern Wood Utilization Council. Bulletin no 18) Paper $2.00 2537

Contents: Front-line developments in wood treatment research, by R. H. Carter. Improving wood by resin impregnation, by T. D. Perry. New developments in resin adhesives, by G. P. Hardt. Fire retardant treatments, by F. A. Hartman. Lumber impregnation, by R. E. Anderson. The vapor drying process, by M. S. Hudson. Chemical and mechanical aids in wood bending, by D. E. Howes and D. E. Howes, Jr. Impregnation of wood with maple hydrate, by R. S. Aries and R. Mabry.

Note. A collection of technical papers presented at one of the quarterly meetings of the Northeastern Wood Utilization Council and designed to present authentic information on recently developed processes of treating wood so as to increase its resistance to decay, reduce its susceptibility to warping, lower its inflammability and increase its ability to be formed by bending.

NORTHEASTERN WOOD UTILIZATION COUNCIL

Wood distillation. New Haven, Conn., 1947 60 p illus. 23 cm. (Northeastern Wood Utilization Council. Bulletin no 15) Paper $1.00 2538

Contents: Foreword. Modernization of hardwood distillation, by R. H. Twining. Resume of research in Quebec, by J Risi. Recent developments in the production of charcoal and by-products, by R. S. Aries. Activated carbon as wood product, by R. H. Twining. Appendix: Statistics of production and export.

Note. A useful collection of technical papers which review the present status of charcoal manufacture and wood distillation practice. Details are given of the continuous method of charcoal production recently developed in Europe. The volume is published in the interests of commercial charcoal producers and timber growers, and is intended to supplement the Council' earlier work, Bulletin no. 10, *Charcoal production.*

NORTHEASTERN WOOD UTILIZATION COUNCIL

Wood products for fertilizer report of conference at Orono Maine June 29, 1945 New Haven Conn 1945 72 p illus 23 cm. (Northeastern Wood Utilization Council. Bulletin no 7) Paper $1 00 2539

Contents Fertilizer requirements of the Northeast, by J A. Chucka. The value of wood ashes as fertilizer by H. A. Lunt. The use of lignin in potato fertilizer by S. Dunn, J. Selberlich and D S. Eppelsheimer The use of sawdust, shavings and superphosphate with dairy manure by A. R. Midgley Comparisons of sawdust and wheat straw for bedding, by J W White Action of soil bacteria on wood products, by C. Thom. Fundamentals of lignin chemistry as applied to fertilizer by J Selberlich. Discussion of lignin from sulphite mills Research on lignin as soil builder by R. S. Aries. Appendix Comparisons of various methods of sulphite pulping from the point of view of waste liquors.

Note Most of the papers in this report are based on investigations conducted at state agricultural experiment stations. Each one is accompanied by transcript of the discussion that followed the reading of the paper

NORTHEASTERN WOOD UTILIZATION COUNCIL

Wood yeast for animal feed. New Haven, Conn., 1946 198 p illus. 23 cm. (Northeastern Wood Utilization Council. Bulletin no. 12) Paper, $2 00 2540

Contents. Feed requirements of the Northeast, by P A. Campbell. Part I, Feed value Wood yeast protein for livestock, by E. O. Ritzman. Feeding tests with dairy cows, by E. O. Ritzman. Feed value of wood yeast for pig feeding, by E. Grasseman and A. Tscherniak. The nutritive value of yeast, by R. S. Aries. The use of yeast for animal and human nutrition, by R. S. Aries. Part II, Production of wood yeast The production of wood sugar in Germany and its conversion to yeast and alcohol, text of Fiat report. Production of yeast and alcohol from wood waste, by M. M. Kesten. Progress of further research on wood yeast, by R. S. Aries Appendix Federal control of stream pollution—text of Senate Bill 330.

Note: An estimated seven million tons of wood wastes are discarded annually in New England alone. The Northeastern Wood Utilization Council is attempting to find uses for these materials, and in this collection of papers surveys one of the more promising market possibilities,—the conversion of waste liquor from sulfite pulp mills into food products for livestock. The papers are published for the information of paper manufacturers, farmers and agricultural scientists.

STAMM ALFRED JOAQUIM

Passage of liquids, vapors, and dissolved materials through softwoods. Washington, D C Government Printing Office 1946 80 p illus. 23 cm. (United States. Department of Agriculture. Technical bulletin no. 929) Paper $0.25 2541

Contents Introduction. Capillary structure of softwoods. Structure through which passage occurs. Diffusion calculations. Pressure permeability calculations. Treating processes. Literature cited. Appendix Compilation of physical and structural data used in calculations.

Note The purpose of this publication is to assemble the necessary capillary-structural data and to present approximate calculations covering the differences in the structure effective for the passage of liquids, vapors, and solutes through wood produced by the conifers. The pamphlet should be of use to those concerned with the seasoning of wood, the penetration of chips with chemicals in pulping, and the penetration of wood with preservatives, fire retardants, and anti-shrink chemicals.

FIREARMS

BAEKELAND GEORGE
Gunner's guide. New York The Macmillan Company, 1948 115 p illus. 21 cm. $1 95 2542

Contents: Guns. Bores, chokes, and patterns. Shells. Fit. Form. Lead. Gun manners and safety. Selection and care of guns. Index.

Note: The scope of this little volume is less comprehensive than indicated by the title. It is primarily a concise review of the construction, care, use, and selection of shotguns, and is intended for the guidance of amateur gunners and sporting enthusiasts. The characteristics and mechanisms of various types of shotguns are described in detail, together with a discussion of the proper game and sport shooting. Beginners will find the chapters on the selection of guns and the ensuring of proper fit particularly helpful.

BALLEISEN CHARLES EDWARD
Principles of firearms. New York John Wiley & Sons, Inc., 1945 146 p illus. 21 cm. $2 75 2543

Contents: Introduction. The gun barrel. Recoil. Automatic weapons—functions. Automatic weapons—systems. Automatic weapons—existing types. Trigger and sear mechanisms. Cartridge feeds. Sights. Design problems. The testing of weapons. Appendices: Exterior ballistics. Gun mounts. Index.

Note: The author's avowed purpose in writing this small book was to demonstrate that automatic firearms are machines whose component parts can be both analyzed and designed according to engineering principles. It presents a useful survey of certain automatic weapons and also of firearms parts from this viewpoint.

GRANT JAMES J
Single-shot rifles. New York William Morrow and Company 1947 385 p illus. 24 cm. $5.00 2544

Contents: The Ballard single-shot rifle. Stevens arms. Remington single-shot rifles. The Sharps rifle. Winchester single-shot falling-block rifles. F Wesson rifles. Warfield rifles. Peabody and Peabody-Martini rifles. Whitney rolling block and Phoenix rifles. The Maynard rifle. Ballard single-shot rifles. Remodelling the single-shot rifle. Appendix. Index.

Note: Collectors, who have an affection for the old single-shot rifle and who appreciate the fine workmanship of the early factory-made models, will be interested in this book. The author attempts to catalog all of the standard models, giving the distinguishing features of each. Some information is also provided on cartridges and hand-loading. The author gives freely of his own opinions and advice, and the excellent photographs are mainly of rifles from his personal collection.

HATCHER, JULIAN SOMMERVILLE
The book of the Garand. Washington Infantry Journal Press 1948 292 p. illus. 24 cm. $6 00 2545

Contents (abridged): Part One, History: Types of semiautomatic rifles. Early military semiautomatics. Developments after World War. Caliber .30 Garand finally chosen. New rivals to the Garand. General description of the M1 rifle. The sights. Part Two, Operation: The functioning of the M1 rifle. Care and cleaning. Malfunctions and stoppages. Disassembly and assembly of the M1 rifle. Part Three, The Garand in action. Appendix: Parts and assemblies for the M1. Bibliography of semiautomatic rifles. Index.

Note: This book is both a history of semi-automatic rifle development in the United States, and a manual of the operation and care of the famous Garand rifle, now the official rifle of the United States armed forces. As an officer attached to the Ordnance Department of the United States Army the author was closely associated with the development and proving of the Garand. He has incorporated in his book numerous excerpts and summaries of official documents bearing on the search for a satisfactory rifle and on the development and testing of the Garand and its rivals. The section on use and maintenance is detailed, fully illustrated, and is intended for both civilian and military users.

HATCHER, JULIAN SOMMERVILLE
Hatcher's notebook a standard reference book for shooters gunsmiths, ballisticians, historians, hunters and collectors. Harrisburg, Pennsylvania Stackpole and Heck, Inc. 1948 488 p illus. 24 cm $5.00 2546

Contents (abridged): Brief history of the Springfield. Brief history of the Enfield. Brief history of the .30-'06, the .30 M1, and the .30 M2 cartridges. Automatic gun mechanisms. Notes on machine guns and their development. The military semiautomatic rifle. The strength of military rifles. Receiver steels and heat treatment. The theory of recoil. Gun corrosion and ammunition developments. Random notes on various subjects: The man behind the guns. National match ammunition. Dimensions of cartridges. Primers. Interior ballistics. Distribution of the heat energy of powder. Velocity vs. barrel length. Ballistic data. Bullet penetration in various mediums. Identification codes of German arms, ammunition and optical instrument makers. Reference list of numbers marking changes in gun design or manufacture. Cartridge dimensions and identification tables. Index.

Note: A wide range of historical and technical information has been assembled here. As the subtitle indicates, the work is essentially a reference book but enthusiasts will experience little difficulty in reading it through. The author has written authoritatively out of a long experience as an Ordnance officer in the U. S. Army. He is also well known as a writer on shooting and small arms.

JOHNSON MELVIN MAYNARD, JR.
Practical marksmanship the technique of field firing with an introduction by Julian C. Smith. New York William Morrow and Company 1945 183 p. illus. 22 cm. $3.00 2547

Contents: Introductory exterior ballistics. The art of hitting. Sights. Sighting-in. Holding and positions. Aiming and pointing. Firing. Adjusting by strike—bracketing. Short range snap shooting. Moving targets. The effective range. Types of fire. Put all on it. Malfunctions and stoppages—their prevention and remedy. Safety precautions. Appendices: Sniping—past and present. Target practice and the combat training of the soldier.

Note: Instruction in the best methods of firing all types of shoulder weapons—manually operated—semi-automatic—and automatic, so as to register maximum hits on the target is the purpose of this book. It is intended for sportsmen, for officers in charge of training troops, and for the individual soldier who is interested in improving his rifle-range score. There are numerous photographs illustrating various shooting positions.

ROPER, WALTER FREDERIC
Pistol and revolver shooting. New York The Macmillan Company 1945 256 p illus. 21 cm. $2 49 2548

Contents: In general. .22-caliber revolvers and automatic pistols. Center-fire revolvers and automatics. The American single shot pistol. Ammunition. Cleaning. Accessories. Handgun stocks. Handgun sights. The matches, rules, and range customs. The International and Olympic slow-fire pistol match. Learning to shoot. Handgun ballistics. Long range with handguns. Index.

Note: Among the various makes of pistols and revolvers covered in this interesting book are the Luger, Walther, Colt, Harrington and Richardson, Smith and Wesson, and Remington. Police and military models as well as the many types of target pistols are described. The developmental history of handguns is traced and numerous anecdotes involving persons now or formerly connected with the manufacture and use of side-arms are reported. The reader is given the

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STAMM, ALFRED JOAQUIM

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MILITARY SCIENCE

GENERAL

BAXTER, JAMES PHINNEY 3RD

Scientists against time. With illustrations. Boston Little Brown and Company 1946 473 p illus. 22 cm. (Science in World War II) $5 00 2551

Contents: Part One, The race for superiority in new weapons in the Second World War Organization wins time. Science and strategy The menace of submarine warfare. Naval warfare on and above the surface. Amphibious warfare. Air warfare. Land warfare. Part Two, New weapons and devices: The scientific front expands. Radar and loran. Radar countermeasures. Contributions to subsurface warfare. New devices for air warfare. Rockets. Fire control. Proximity fuzes. Dukw and weasel. Part Three, Chemistry and the war: New explosives and propellants. Why not gas? Smoke, incendiaries, and flame throwers. Part Four Military medicine Antimalarials. Blood and blood substitutes. Penicillin. Insecticides and rodenticides. Aviation medicine. Part Five, Men and machines: Selection and training. Operations research and field service. Part Six, The atomic bomb Research to May 1 1943. The triumph of the Manhattan District. Epilogue. Appendices. Acknowledgments. Index.

Note: The first-published of series of books designed to record the history of the activities of the Office of Scientific Research and Development (see the series title in the Index). It was designed to present comprehensive although condensed survey It encompasses field of phenomenal scope. The accounts do not stop with the development of device but go on to show its effect upon the prosecution of the war The story of accomplishments is overwhelmingly impressive but perhaps the greatest value of the book lies in its portrayal of cooperative scientific and technical effort under the pressure of military necessity

BRADLEY DAVID

No place to hide. Boston Little, Brown and Company 1948 182 p illus. 19 cm. $2.00 2552

Contents: Prologue. Departure. Dress rehearsal. Able day Baker day The count of ten. Appendix: A layman's guide to the dangers of radioactivity

Note: An eyewitness account, presented in the form of diary of the tests of the atomic bombs at Bikini. The author is medical doctor who was attached to the Radiological Safety Section of the Operation Crossroads The book is addressed to lay readers, and it conveys dramatically and forcefully some of the terrible implications of the atomic bomb and radioactive substances if they are employed in warfare. Enlightening facts are given on the observed effects of radioactivity upon the exposed ships and upon animal life.

THE CHEMICAL CORPS ASSOCIATION

The Chemical Warfare Service in World War II a report of accomplishments. New York Reinhold Publishing Corporation 1948 222 p illus 23 cm. $4 00 2553

Contents: The CWS prior to World War II. Organization for war 1940-1941. Research and development. Procurement and supply of CWS materiel for the armed forces. Training. Readiness for gas warfare. The CWS mission in theaters of operation. The 4.2-inch chemical mortar. Denying enemy observation. Flame throwers By-products from the implements of war. Appendices.

Note: This interesting preliminary account of the Chemical Warfare Service during World War II is sponsored by the Chemical Corps Association which consists of present and former personnel of the Chemical Corps (the CWS was redesignated the Chemical Corps, August 2nd, 1946) of the U S. Army It discusses in some detail the work and accomplishments of the CWS during the recent war along with brief account of its early history While making no claim to completeness, it does give good coverage of the main activities in both the training and active service fields including actual accounts of battles in Europe and the Far East. The uses of gas, smoke, incendiary flame-throwing, and biological warfare weapons are all mentioned, along with lesser known activities, such as providing chemical supplies, gasproofing of clothing, disinfecting or decontaminating polluted areas, toxic water purification, and many other special jobs of improvisation in the field

CUNEO JOHN R

The air weapon 1914–1916 Volume II of Winged Mars. Harrisburg Military Service Publishing Co., 1947 503 p. illus. 24 cm. $7.50 2554

Contents: Part I, Tactical air operations over land. The 1914 doctrine of warfare. The period of concentration in the West. The French offensive (August, 1914) The German march through Belgium and northern France. The pursuit to the Marne The battle of the Marne. The conclusion of open warfare in the West. The battles of Gumbinnen and Tannenberg. The ending of the Eastern campaign, 1914. Behind the operations of the air weapon (1914) Trench warfare—blessing and blight. The reorganization of the German air force (1915) T the end of 1915. The German air weapon in the 1915 offensives against Russia and Serbia. German antiaircraft defenses (1914–1915) Verdun (1916) The preliminaries to the Somme offensive (1916) The Somme offensive (1916) The conclusion of the Somme offensive (1916) The reorganization of the German army air force (1916) Part II, Tactical air operations at sea. The watch for the British fleet (1914) Action in the North Sea (1915) Prelude to Jutland. The battle of Jutland. The Sunderland operation. Part III, Strategic air operations The raids on Great Britain (1914–1916) The bombing of Germany Notes. References. Index.

Note (3180) A continuation of the history of European air power begun in the author's *Winged Mars*, Harrisburg, Pa. Military Service Publishing Co., 1942, $3 00. This volume contains an historical study of the growth of the military air forces of both sides during the 1914–1916 war years, with particular stress on German experiment. Against background of the major battles of this period, it provides clear description of the development of the tactical and strategic handling of this new military arm and of the changes brought about by the expanding air forces of each of the major combatants. As in the first volume an extensive bibliography of English, French, and German references is included.

GAVIN, JAMES MAURICE

Airborne warfare. Washington Infantry Journal Press 1947 186 p illus 24 cm. $3 00 2555

Contents. Introduction, by Major General William C. Lee. Paratroops over Sicily Plans and operations in the Mediterranean. Back door to Normandy Holland: airborne army's first test. The airborne operations of 1945. Airborne armies of the future. Antiairborne defense. The use of airborne troops in the future. Index

Note. Although good share of the space in this book is devoted to brief accounts of operations by airborne troops of the Allies during World War II, the author's chief purposes are to evaluate the present methods of using such troops in modern military operations and to forecast the use of airborne troops in future wars. The present strategy and tactics of this form of warfare are described in some detail. However the book is, on the whole, an exploratory essay rather than treatise on the subject. The author was commanding general of the famous 82nd Airborne Division of the United States Armed Forces in World War II.

GILLIE MILDRED HANSON

Forging the thunderbolt, a history of the development of the armored force foreword by Jacob L. Devers. Harrisburg, Pa. The Military Service Publishing Company 1947 330 p 22 cm. $5 00 2556

Contents: The monster of Cambrai. The gasoline brigade. From sabers to monkey wrenches. The tortoise and the hare. Test-tube tactics. Growing pains. Blueprint for blitzkrieg. One Sunday in June. Now is no time to die. Prologue to combat. Operations Torch and Husky. Tanks or to hell with it. Continental cavalcade. Epilogue. Notes. Index.

Note: Rather than a scholarly history this book is an easy-to-read dramatic account of the development of the modern tank, of military tactics based on armored land vehicles, and of the exploits of armored forces in World War I and World War II. Considerable space is given to the efforts of men such as General Adna R. Chaffee who carried the burden of convincing more conservative military leaders of the necessity for mechanization. Outstanding models of tanks are mentioned but there are few technical details. The book appeals to military men and to general readers who like military literature.

ICKS, ROBERT JOSEPH

Tanks and armored vehicles. New York Duell, Sloan and Pearce 1945 264 p. illus. 23 cm. $4 75 2557

Contents: Armored vehicles to World War I. Elements on design and construction. United States. Great Britain. U.S.S.R. France. Italy Germany Japan. Other countries. Bibliography Index. Addenda.

Note: Over four hundred photographs, as well as historical outlines and brief technical data covering the principal types of tanks, gun-carriers, and armored cars developed by the world's major powers, are included in this book. The data sections for each country consist of a series of short paragraphs, each paragraph of which describes the characteristics of a single military vehicle. These descriptions usually mention the weight, dimensions, speed, type of engine and its horsepower armor thickness, armament, size of crew etc. Descriptions are referenced to the photographs. The bibliography lists about one hundred titles. Both military men and laymen interested in military science will find this book informative and interesting.

MARSHALL, SAMUEL LYMAN ATWOOD

Men against fire the problem of battle command in future war New York William Morrow and Company 1947 215 p illus. 21 cm. $2 75 2558

Contents: The illusion of power. On future war. Men on the battlefield. Combat isolation. Ratio of fire. Fire as the cure. The multiples of information. The riddle of command. Tactical cohesion. Why men fight. The aggressive will. Men under fire. Footnote to history. Index.

Note: A penetrating analysis of the philosophy and methods of command in minor tactics. It is based on the author's observation and investigations of the combat behavior of American infantrymen in World War II and upon his findings that U. S. Army officers do not make enough use of word-of-mouth communication under battle conditions. He believes that speech is so essential in effective leadership in battle that he recommends changes in the training of officers so that this technique of leadership will be used. The author a colonel in the U. S. Army was official historian for the European theater of operations.

SHURCLIFF WILLIAM A.

Bombs at Bikini the official report of Operation Crossroads Prepared under the direction of the Commander of Joint Task Force One. New York Wm. H Wise & Co., Inc., 1947 212 p illus. 23 cm. $3 50 2559

Contents: Foreword, by Vice Admiral W H P Blandy Why Operation Crossroads? Early problems. Plans and planners. Technical offensive. Scientific offensive. Bikini overture. Test A. Explosion in air Test B Underwater explosion. Appendices. Index.

Note: A description of the two tests directed by the Joint (Army and Navy) Chiefs of Staff in the summer of 1946 to evaluate damage resulting from atomic detonation in the air and under water In addition to covering the elaborate details of preliminary planning the book documents positioning of the target vessels, test animals taken aboard, the special equipment of gages, cameras, and recording machines, and finally the great mass of technical data which was collected on shock wave pressure and velocity and on nuclear radiations. Written by the Historian of Joint Task Force One which conducted the tests, the account is presented with vividness and simplicity that will engage the interest of the lay reader. There are numerous photographs, also such supplementary material in the appendices as organization charts, names of participating officials and observers, and the list of target and support vessels.

SMYTH HENRY DEWOLF

Atomic energy for military purposes. The official report on the development of the atomic bomb under the auspices of the United States Government, 1940–1945 Written at the request of Major General L. R. Groves. Princeton N J Princeton University Press, 1945 308 p illus 20 cm. Paper $1.25 cloth, $1.25 2560

Contents: Introduction. Statement of the problem. Administrative history up to December, 1941 Progress up to December 1941. Administrative history 1942 1945. The metallurgical project at Chicago in 1942. The plutonium production problem as of February 1943 The plutonium problem, January 1943 to June, 1945. General discussion of the separation of isotopes. The separation of the uranium isotopes by gaseous diffusion. Electromagnetic separation of uranium isotopes. The work on the atomic bomb. General summary Appendices. Indexes.

Note: Undoubtedly a landmark in the history of civilization as well as in technical literature. This edition has a more attractive format than the Government Printing Office edition, and contains also a few textual variations, some illustrative matter and an index which are not present in that edition. Also, copies of the fifth and subsequent printings have contained as Appendices 7 and 8 "The British Information Service statement, Britain and the atomic bomb, August 12 1945; and the "Canadian Information Service statement, August 13 1945

UNITED STATES ARMY CHIEF OF STAFF

General Marshall's report the winning of the war in Europe and the Pacific. Biennial report of the Chief of Staff of the United States Army July 1 1943 to June 30 1945 to the Secretary of War New York Published for the War Department in cooperation with the Council on Books in Wartime by Simon and Schuster 1945 123 p illus. 30 cm. Paper $1 00 2561

Contents (abridged) Victory in Europe: The strategic concept. The fall of Italy Operation Overlord—The preparations—Victory in the air—The liberation of France—The Wehrmacht's last blow Victory over Japan The road to China. Unremitting pressure—Reconquest of the Philippines—Final victory Occupation. Our weapons. The troops. For the common defense.

Note: Here in language suited to the average reader is an official account of allied military operations in World War II with emphasis on the part played by the U S. Army in achieving final victory The detailed descriptions of the strategy tactics, and logistics involved, and of the battlefield performance of American men and materiel make this report fascinating reading. A series of photographs illustrates troop movements in the various campaigns.

UNITED STATES OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT

Combat scientists, by Lincoln R. Thiesmeyer and John E. Burchard. Volume editor Alan T Waterman, foreword by Karl T Compton Boston Little, Brown and Company 1947 412 p illus. 22 cm. (Science in World War II) $5 00 2562

Contents (abridged) Part One, History of the Office of Field Service Blueprint for field service—the civilian specialist goes up front. High-pressure education—basic training for the field man. Conning tower to quarter-deck—science backs up the fleet. Scientific sleuthing—research behind those Axis boasts. DUKW's, weasels, water buffaloes, and penguins—the trucks that went to sea. Wizards of ether and wire—the electrical eye-and-ear specialists. Fantasies, phantoms, and facts—rockets, ram-jets, and robots. Lessons for to-

marine—the message of experience. Part Two, The story of NALOC and DOLOC. Wartime alphabet—glossary of abbreviations. Personnel index. Subject index.

Note. The Office of Field Service was established in October 1943 to handle activities in the field for the Office of Scientific Research and Development. Its scientists, serving on all battle fronts, gave expert advice to the Army and Navy on the proper use of such specialized equipment and techniques as radar flame throwers, infrared gun sights, tropical medicines, etc. This volume, written by men who were actively associated with the O.F.S., describes this agency's wartime work and its contributions to the United States war effort. The series (see index) of which this book is part, constitutes an official record of the activities and accomplishments of the Office of Scientific Research and Development.

UNITED STATES. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT

Organizing scientific research for war the administrative history of the Office of Scientific Research and Development, by Irvin Stewart. Foreword by Vannevar Bush. Boston Little, Brown and Company, *1948* *358* p Illus. 22 cm. (Science in World War II) $5.00 2563

Contents (abridged) Part One, Harnessing science National Defense Research Committee (of the Council of National Defense) Office of Scientific Research and Development. Committee on Medical Research of OSRD. Other OSRD research groups. Office of Field Service of OSRD. Part Two, Liaison Liaison with the armed services. Liaison with Allied governments. Part Three, Supporting operations: The Administrative Office. The contract. Fiscal affairs. Patent policy Priorities and property Security Scientific manpower. Acceptance of voluntary services. Publicity public relations, and *publications. Part Four Demobilization Demobilization of OSRD.* Appendices Index.

Note The Office of Scientific Research and Development was established in June, 1941 for the purpose of mobilizing the scientific personnel and resources of the United States to aid in the prosecution of World War II. This volume provides detailed account of the organization and administrative operations of this highly important governmental agency It describes how the various committees and sub-committees were organized, outlines their specific duties, and shows the manner in which the agency as whole collaborated with the armed services and allied governments. The series (see index) of which this book is part, constitutes an official record of the activities and accomplishments of the Office of Scientific Research and Development.

ORDNANCE AND GUNNERY

BARNES, GLADEON MARCUS

Weapons of World War II. New York D Van Nostrand Company Inc., 1947 317 p Illus. 29 cm. $7.50 2564

Contents Introduction The Ordnance Department. Small arms and small arms ammunition. Aircraft armament. Ammunition Artillery Rockets and launchers Tanks, gun motor carriages, and motor transport. Research and materials Conclusion Index.

Note A useful and historically important reference book of interest both to professional military men and to laymen interested in military science It covers the arms, ammunition, and transport or landing equipment developed or controlled by the U S. Army Ordnance Department. Photographs and detailed physical descriptions are given for most of the weapons, and there are selected accounts of their uses and effectiveness The preliminary outline of research work and of Ordnance coordination activities with American industry is particularly interesting. The author is Major General, U S. Army (Retired)

HARVARD UNIVERSITY COMPUTATION LABORATORY

Tables for the design of missiles Cambridge Mass. Harvard University Press 1948 *226* p Illus. 28 cm. (The Annals of the Computation Laboratory of Harvard University Vol. XVII) $8.00 2565

Contents (abridged) Part I, Definitions of the tabulated functions Part II, Method of computation. Part III, Interpolation in the tables. Part IV The use of the tables. Part Non-standard ogives. Tables.

Note A set of ballistics tables with directions for their use in determining the flight characteristics of projectiles. The rapid computation of such typical mathematical factors in missile design as position of center of gravity volume, polar and transverse moments of inertia are made possible by use of the auxiliary functions whose variations are tabled here. The work is for ballisticians and was originally calculated for the U S. Navy by Harvard University's automatic sequence controlled calculator

JOHNSON MELVIN MAYNARD, JR., AND CHARLES T HAVEN

Automatic weapons of the world New York William Morrow and Company 1945 644 p Illus. 24 cm $10.00 2566

Contents (abridged) Part One, General principles: Classification of automatic weapons. A design study of automatic mechanisms. Methods and systems of feed. Part Two, History and development *Early automatic arms Heavy machine guns. Light machine guns.* Submachine guns and carbines. Sporting rifles and shotguns. Early and experimental pistols. Automatic cannon. Part Three, How to keep them firing: Malfunctions and stoppages. Ammunition. Part Four How they may be employed in combat Fire effect. Combat efficiency of the rifle. Automatics in the squad. Part Five, Miscellaneous considerations: Considerations affecting the light machine gun. The problem of ammunition supply Accuracy No flash, no smoke no noise. Appendices: Ammunition table. Drawings and ballistics of military ammunition. Bibliography Index.

Note. (3143) Probably more useful as concise encyclopedia of the subject than as text for reading, this compilation is considerably expanded revision of the authors' *Automatic arms* of 1941. The most significant additions to the present volume are discussions of new weapons and refinements in older ones employed in World War II. The present volume runs to some three hundred pages more than the original, with noticeably increased illustrations, appendices, and bibliographies, as well as main text.

OHART THEODORE CHARLES

Elements of ammunition New York John Wiley & Sons, Inc., 1946 412 p Illus. 24 cm. $6 00 2567

Contents Part I, Explosives, primers, detonators, and tracers: Introduction. Military explosives. Primers, detonators, and tracers. Part II, Small-arms ammunition. Part III, Artillery ammunition Artillery projectiles. Artillery fuzes and boosters. Artillery complete rounds. Part IV Aircraft ammunition: Bombs. Bomb fuzes. Part Pyrotechnic ammunition. Part VI, Rocket ammunition Rockets. Part VII, Miscellaneous ammunition. Part VIII, Ammunition packing. Index.

Note This comprehensive and well-integrated textbook grew out of the need to give adequate and quick instruction to United States Army personnel engaged in the ammunition program of the Ordnance Department during World War The treatment is explicit and detailed. Definitions accompany every technical term used and liberal use is made of illustrative diagrams, graphs, tables, and photographs. Each article is discussed as to general construction, problems of design, uses, limitations, and special advantages. Despite its encyclopedic content, the book is extraordinarily readable.

SMITH WALTER HAROLD BLACK

Small arms of the world, the basic manual of military small arms American, British, Russian, German, Italian, Japanese and all other important nations. Fourth edition, revised and enlarged. Harrisburg, Pa. Military Service Publishing Company 1948 500 p. Illus 29 cm. $6 00 2568

Contents: Identification of foreign small arms. Strength of military actions. Proof marks. Foreign ammunition and American equivalents. German small arms manufacturers' codes. German small arms ammunition manufacturers' codes. Austria. Belgium. Britain. China. Czechoslovakia. Denmark. Finland. France. Germany Greece. Hungary Italy Japan. Mexico. Netherlands. Norway Poland. Portugal. Rumania. Russia. Spain. Sweden. Switzerland. Turkey United States.

Note (5170) A reference manual of the rifles, carbines, pistols, revolvers, machine guns, and rocket launchers in use before and during World War II by the armed forces of the nations mentioned in the above contents. Reproductions of photographs and drawings illustrate the individual weapons and the methods of loading, firing, and field-stripping them. Technical data on such matters as caliber muzzle velocity and range are included. In this edition the work has been improved by the addition of nearly 150 pages of new material, among which are descriptions of the small arms of twelve nations not covered in the first edition and by the addition of an index.

UNITED STATES OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT

New weapons for air warfare fire-control equipment, proximity fuzes and guided missiles. Joseph C. Boyce, volume editor With a foreword by Richard C Tolman Boston Little Brown and Company 1947 292 p illus 22 cm. (Science in World War II) $4 00 2569

Contents (abridged) Administrative organization. Initial activity in fire control. Airborne fire control. Automatic controls. Naval radar fire control. Early proximity fuzes. Production problems. The Applied Physics Laboratory of the Johns Hopkins University The VT fuze in action. Exploding torpedoes by proximity devices. Rocket fuze program. Bomb fuzes Mortar fuze development. Glide bombs: Pelican and Bat. The Roc. Radio-controlled bombs: Azon and Razon. Target-seeking bomb Felix. Personnel index. Subject index.

Note: A comprehensive account of the work carried on by those divisions of the Office of Scientific Research and Development responsible for the wartime development of the various mechanisms used to make shooting more accurate. Much technical data have of necessity been omitted and the descriptions of the development, purpose and operating principles of each device are given in nontechnical manner which will appeal to the interested layman. Throughout the book constant reference is made to the individuals and industrial firms who were largely responsible for the success of each project. The series (see Index) of which this book is part, constitutes an official record of the activities and accomplishments of the Office of Scientific Research and Development.

UNITED STATES OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT

Rockets guns and targets rockets, target information erosion information and hypervelocity guns developed during World War II by the Office of Scientific Research and Development. Volume editor John E Burchard with a foreword by Richard C Tolman. Boston Little, Brown and Company 1948 482 p illus. 22 cm. (Science in World War II) $6.00 2570

Contents (abridged) Part One, Rocket ordnance Orientation. Rocket fundamentals. Rocket history 1918–1939 Getting under way Formation of Section H. The Lauritsen report OSRD reorganization for rocketry Further history of the Eastern group Bazooka. The 4.5 inch aircraft armament rocket Recoilless guns. Flame throwers and robot bombs Jet-assisted take-off for aircraft Work at the California Institute of Technology The early work of the California Institute group The Mousetrap and Marine Mousetrap. Fuze problems Forward firing aircraft rockets. The Spinner family Termination. Part Two, Terminal ballistics Knowledge is weapon, tool found in the years The little bullet that didn't hurt. Part Three Hypervelocity guns and control of gun erosion The quest for super-gun Operating the Division machine Means to reduce erosion The quest for hypervelocity The gun of the future Appendices to Part Three Indexes.

Note A comprehensive account of the organization and work of the three divisions of the National Defense Research Committee which carried on research relating to rockets, the effect produced by weapons through impact and explosion and gun design and construction Technical data are included, but this aspect of the subject is subordinated to the story of how civilian scientists and military experts worked together to successfully produce new weapons for war The series (see Index) of which this book is part, constitutes an official record of the activities and accomplishments of the Office of Scientific Research and Development.

ROCKETS

GODDARD ROBERT HUTCHINGS

Rocket development liquid fuel rocket research, 1929–1941 Edited by Esther C. Goddard and G Edward Pendray New York Prentice-Hall, Inc., 1948 291 p. illus 24 cm. $6 50 2571

Contents Foreword, by Harry F Guggenheim. Tests conducted at Camp Devens, Mass., for improvement of liquid-fuel rocket-motor efficiency Early experiments in New Mexico Work on rocket problems at Clark University Tests resumed in New Mexico, with simple pressure fuel feed, flight control and parachute. Tests for the development of more powerful motor Flight tests with 10-inch-diameter motors, in nitrogen-pressured rockets. L-series flight tests continued, with 5 3/4 4-inch-diameter motors. L-series flight tests concluded, with rockets pressurized by liquid nitrogen. Experiments toward development of propellant pumps. Static pump tests continued. Conclusion of pump tests for the purpose of developing pump-driven flight rocket. Index.

Note Robert H. Goddard, pioneer worker in the field of rocket research and one of the leading authorities on the subject, died in 1945. This volume, prepared by his widow and another industry expert, provides summarized account of the major experiments performed by Goddard from 1929 to 1941 The technical data and specifications regarding the construction and operation of each rocket tested, and the descriptions of the results achieved, are based on Goddard' own notebooks, and will be of considerable interest to engineers working with liquid-fuel rockets. Because of Goddard's leadership in this field, the book also constitutes history of the growth of rocket research in the United States.

LEY, WILLY

Rockets and space travel the future of flight beyond the stratosphere. New York The Viking Press 1947 374 p illus. 22 cm. $4.50 2572

Contents: The beginnings of an idea. The decades of the great dreams. "The rockets' red glare." Prophets with some honor The battle of the formulas. Success, failure, and politics. The meteorological rocket. The rockets of the second World War. Personalities The rocket into cosmic space. The spaceship. Terminal in space. Conclusion. Appendices: Rocket airplanes and rocket-assisted take-off. Notes and tables. Bibliography Index.

Note (4351a) A revision of the author's *Rockets; the future of travel beyond the stratosphere.* This volume provides an interesting easy-to-read account, for general readers, of the history the present status, and the possible future uses of rockets, particularly in relationship to interplanetary travel. Improvements made in this edition include two new chapters dealing with the military rockets of World War II, an amplified account of Dr Robert H. Goddard work with rockets, material on rocket-propelled torpedoes, and the incorporation of new developments in the spaceship and space-terminal chapters. The annotated bibliography of books and periodicals about rockets covers eight pages.

PENDRAY GEORGE EDWARD

The coming age of rocket power New York Harper & Brothers 1945 244 p. illus. $3.50 2573

Contents (abridged) Engines for day to come. Air flame and power The rocket as it flies. Years of tribulation. Journeys to the moon? Pilotless aircraft and guided missiles. Appendix: A lexicon of rocket power Index.

Note: A readable account of the development of rocket power from its earliest beginning up to its present-day applications in such devices as jet-propelled planes and military rockets. The book is addressed particularly to laymen and amateur enthusiasts, but it contains enough historical information to be of some interest to the professional engineer also. There is useful glossary but no bibliography However, there are numerous mentions of pioneer inventors in this field and other persons who have furthered the development of rockets and occasional references are included in the text to their writings.

ROSSER, JOHN BARKLEY, AND OTHERS

Mathematical theory of rocket flight, by J Barkley Rosser Robert R. Newton, and George L. Gross. New York McGraw Hill Book Company Inc., 1947 276 p illus. 23 cm. $4.50 2574

Contents The equations of motion of a rocket. Motion after burning. Motion during burning. Boundary conditions. Properties of the rocket functions. Appendixes: A simplified theory of flow through a nozzle. Derivation of principle V. Minor factors affecting the flight of a rocket. Functions for use with an unstable rocket. Functions for use with jet damping. Bibliography. Glossary of symbols. Index.

Note: Technically this book is *Final report no. B 2-2 of the Allegany Ballistics Laboratory OSRD 5878.* As its origin would suggest, the work was written primarily for persons with advanced training in science. The flight characteristics of rockets throughout the entire trajectory are described in detail, chiefly by means of complex mathematics. Many of the sections are preceded by rather brief non-mathematical explanations. These passages are intended to make the book useful to the non-mathematical reader but they account for such a small fraction of the text that the book's use will probably be as an introduction to the subject for scientists about to engage in rocket research for the first time.

ZIM HERBERT SPENCER

Rockets and jets illustrated with drawings by James Macdonald and with photographs New York Harcourt, Brace and Company, 1945 326 p illus 22 cm. $3.50 2575

Contents: The story of things not yet. Basic principles. The origin of the rocket idea. Rockets in battle. Powder rockets. Rocket vehicles. Modern battle rockets. Aerial rockets. Rockets for the future. Decomposition or combustion. The liquid fuels. Rocket motors. Experimental rockets. High-altitude rockets. Escape from the earth. The goals of interplanetary rockets. Interplanetary problems. Jet propulsion that works. The launching of the squirt. Jets and near jets. The secret weapon. The future of rockets. Appendix The American Rocket Society and others. Index.

Note A popular non-technical account of the development of rockets and jet-propelled devices, from the earliest times to the present day. It is written simply enough so that young people can understand it, but it contains enough information to hold the interest of adult readers as well. About ninety photographs and drawings are included.

NAVAL SCIENCE

BALLANTINE, DUNCAN SMITH

U S naval logistics in the Second World War Princeton, N J Princeton University Press 1947 308 p 22 cm. $3 75 2576

Contents Logistics in modern naval warfare. The Second World War—first phase. The beginnings of method. Build-up for the offensive. Logistics in total war. The Navy Department. Distribution. The conclusion of the war. Logistic lessons of the war. Bibliography. Index.

Note A detailed, critical study of the methods employed by the United States of America during World War II in the distribution and allocation of munitions and supplies, to meet the needs of its Navy on the several battlefronts. The author describes the various plans which were developed during the war and assesses the effectiveness of each system of organization. He is full of praise for the tremendous accomplishments of the logistic planning, but he does not hesitate to point out weaknesses and limitations where they existed. The book is based largely on the files of the Navy Department.

FIELD JAMES A. JR.

The Japanese at Leyte Gulf the Shō operation. Princeton N J Princeton University Press 1947 162 p illus 22 cm. $2 50 2577

Contents The October situation. The activation of the Shō plan. The approach. Y-day—the air strikes. X-day—high tide. The end of navy. A note on source materials. Index.

Note In this book Japanese planning, motives and tactics in what the author correctly terms "the greatest sea fight of all time" are described and analyzed. The author was member of the Naval Analysis Division of the United States Strategic Bombing Survey (Japan) and some of his material is drawn from official *Interrogations of Japanese officials* and *campaigns of the Pacific War* but the book is based also on direct questioning of Japanese naval officers and personal study of Japanese documents. Japanese action during the battle is described in considerable detail, and the text is supplemented by numerous charts that show Japanese fleet positions at various stages.

KAFKA ROGER AND ROY L PEPPERBURG

Warships of the world. Victory edition. New York Cornell Maritime Press, 1946 1167 p illus. 25 cm. $12.50 2578

Contents (abridged) Chronology. United States. Argentina. Australia. Belgium. Brazil. Bulgaria. Canada. Chile. China. Colombia. Costa Rica. Cuba. Denmark. Dominican Republic. Ecuador. Egypt. Eire. Finland. France. Germany. Great Britain. Greece. Haiti. Hungary. Iceland. India. Iran. Iraq. Italy. Japan. Manchuria. Mexico. Netherlands. Newfoundland. New Zealand. Nicaragua. Norway. Paraguay. Peru. Philippine Islands. Poland. Portugal. Rumania. Siam. Spain. Sweden. Turkey. Union of South Africa. Union of Soviet Socialist Republics. Uruguay. Venezuela. Yugoslavia. Zanzibar. Index to chronology. Index of ship names and numbers.

Note (5190) The first edition of this reference book was published in 1944 and had as its purpose the presentation of descriptive information on the navies (and the individual ships in them) of the world. With the close of World War II, much more information became available and the work was accordingly revised. Full information is now included on the Japanese navy. A new useful feature is the fifty-six page chronology of naval events from September 1 1939 to September 2 1945. Details of armament, information on the naval engagements of specific ships, and descriptions of ships commissioned during the war are now included. Most of the ship profiles are new. The type was completely reset and set more compactly so that considerably more data are supplied in the same format and without much increase in the number of pages.

LEVERT LEE J

Fundamentals of naval warfare. Sketches by William T Brady New York The Macmillan Company 1947 488 p illus. 22 cm. $5 00 2579

Contents (abridged) Section One, Introductory. Section Two, History. The history and development of weapons. History of propulsion. Development of fighting ships. Epochal naval battles. Section Three, Weapons. Explosives, chemical and atomic. The gun. Rockets and flying bombs. Mines. Section Four. Ships. Battleships. Aircraft carriers. Destroyers. Submarines. Landing ships and craft. Section Five, Shore installations. Base planning. Harbor defense. Section Six, Types of naval warfare. Fleet actions. Commerce raiding. Aerial warfare. Submarine warfare. Section Seven, Engineering. Hitting power range, and accuracy. Armament. Speed and power. Propulsion machinery. Ship's dimensions. Section Eight, Communications and control. Gyroscope and electronic devices. Maneuvering board. Radar. Fire control. Section Nine, Staff. Line and staff organization. Strategy and tactics. Detailed plans (organizing). Section Ten, Staff problems. Section Eleven, The future. The twilight of the aircraft carrier. Naval warfare in the atomic age. Bibliography. Glossary. Ship index. General index.

Note A popular survey of naval weapons, organization, and warfare. One of its purposes is to assist citizens of the United States of America to achieve better understanding of these subjects so that public opinion will favor adequate support of the Navy as major branch of national defense. The author naval architect and Naval Reserve officer during World War II, has succeeded in making the book interesting and informative even though he has included considerable amount of technical information and terminology.

MITCHELL DONALD WILLIAM

History of the modern American navy from 1883 through Pearl Harbor New York Alfred A. Knopf 1946 477 p illus. 22 cm. $4.50 2580

Contents (abridged) Genesis of the new navy. Building the new navy. The navy in diplomacy (prior to 1898). The Spanish-American War. The American navy in the Orient. Expansion—the age of Mahan. Criticism and reform. The United States Navy as the "big stick." Preparing for war. Defeating the submarine menace. Other naval activities of World War. Demobilization. The Washington Conference. Naval decline—Harding, Coolidge, Hoover. The navy in postwar diplomacy. Naval aid in Polar exploration. The Geneva and London conferences. Changing naval outlook. Roosevelt naval renaissance. Prelude to war. Pearl Harbor. Retrospect and prospect. Appendix I—Source notes. Appendix II—Selections from report of Senate Committee Investigating the Munitions Industry. Appendix III—Bibliography. Index.

Note The evolution of the American navy is traced for the sixty years preceding the Pearl Harbor attack, and clear accounts of the constant expansion up to the years of disarmament in the 1920's, and of the rebuilding program after 1933, are given. Correlation of the navy's growth into great fleet with the country's evolution into world power is adequately handled, as is due tribute to such men as Mahan and the two Roosevelts. The author has achieved "middle" approach between the professional viewpoint and historical scholarship, hence the work has general as well as specialized appeal. The bibliography is extensive.

MORISON SAMUEL ELIOT

History of United States naval operations in World War II Boston Little, Brown and Company 1947 2 v illus. (part col'd) 22 cm. Each vol., $6 00 2581

Contents (abridged) Volume I, The battle of the Atlantic, September 1939–May 1943. The naval antagonists, 1939–1942. Tran-

Atlantic convoys under Anglo-Canadian escort, September 1939–December 1940. "Short of war" policy June, 1940–March, 1941 "Short of war" operations, March–August, 1941 The United States Navy joins battle, September–December 1941. The German submarine offensive of 1942 January–July 1942. The North Russia run, December 1941 July 1942. Missions to Malta, April–May 1942. The organization of anti-submarine warfare, 1939–1943. Merchant ships and their armament. Examples, errors and lessons, January–June, 1942 Ten months' incessant battle, July, 1942–April, 1943. "Drum & Bradfield, September 1941–April, 1943. Analysis and conclusion, April, 1943 The situation from the German point of view The situation from the allied point of view. Appendices. Index. Volume II, Operations in North African waters, October 1942 June, 1943 Part The expedition against French Morocco Preliminaries, July 1940–October 1942 The crossing, 10 October–7 November 1942 Landing at Fedhala, 8 November 1942. The naval battle of Casablanca, 8 November 1942. The northern attack, 7–11 November 1942. The southern attack, 7–11 November 1942, Morocco secured, 9 November–1 December 1942 Part II, The expeditions against Algeria and Tunisia. Preparations, October–November 1942. The winning of Algiers, 8–11 November 1942. The capture of Oran, 8–11 November 1942 The navy in the Tunisian campaign, November 1942 May 1943, Pantelleria. Appendices: Allied ships sunk in operation "Torch, 7–16 November 1942 Western naval task force—expenditure of ammunition, 8–11 November 1942 Western naval task force—summary of beginning action, 8 November 1942 Index.

Note: Here are the first two of projected set of fourteen volumes, each of which will deal with separate phase of the United States Navy's role in the second World War Early in the war the author, *Professor of American History at Harvard University* was commissioned naval captain with the duty of preparing these histories. More than half of the author's time during the war was spent at sea during which period the ships that he visited were often in combat with the enemy The author himself or one of his staff officers was present at every major naval operation after 1942. The present volumes, accordingly are written with an authority and assurance that could only derive from actual participation in the episodes described. Although primarily chronological history of events, enough technical information is included about strategy tactics, and warships and their equipment to justify inclusion of the work here.

PULESTON WILLIAM DILWORTH

The influence of sea power in World War II. New Haven Yale University Press *1947* 310 p illus. 24 cm. $5.00 2582

Contents: Mahan's concept of sea power. Germany's bid for sea power. Sea power between two world wars, September 1919 to July 1940. Sea power saves Great Britain. The opposing high commands. Procurement and personnel. Japanese sea power in the western Pacific. The struggle for the central Pacific. The battle of the Atlantic. The campaign for the Solomons and Aleutians. Sea power and amphibious warfare. Reconquest of the western Pacific. Sea power and surrender The impact of new weapons on sea power and world relations. Index.

Note A historical study in which the development, uses, and influence of Allied and Axis naval power in the second World War are outlined and evaluated. By reliance upon details of naval operations throughout the world during this period, the author measures the strategic and tactical values of the various navies and also attempts to evaluate the worth of seapower in the atomic age. He is follower of Mahan and believes that control of the seas is still the decisive factor in winning wars, despite the advent of the atomic bomb and other new weapons. The material is presented in factual manner and most of the data presented are drawn from official records. However aside from few footnotes, there are no references to sources The work is of value to students of history and international affairs as well as to professional naval personnel.

UNITED STATES BUREAU OF YARDS AND DOCKS

Building the Navy's bases in World War II history of the Bureau of Yards and Docks and the Civil Engineer Corps 1940–1946 Washington D C. Government Printing Office, 1947 2 v illus. 27 cm. v 1 $3.25 v 2 $3 75 2583

Contents (abridged) Volume 1 Part I, The war program and its direction *Planning the public works program.* Wartime organization and growth of the Bureau of Yards and Docks and the Civil Engineer Corps. Wartime contract construction problems. Procurement and logistics for advance bases. The Seabees. Advance base equipment. Part II, The continental bases: Navy yards and graving docks. Floating drydocks. The air stations. The training stations. The supply depots. The ammunition depots. The hospitals. Civil works. Index. Volume 2 Part III, The advance bases: Bases in South America and the Caribbean area, including Bermuda. Bases in the North Atlantic. The Mediterranean area. Construction battalions in France and Germany Pearl Harbor and the outlying islands of Midway, Wake, Johnston, Palmyra, Canton, and French Frigate Shoals. Bases in Alaska and the Aleutians. Bases in the South Pacific. Bases in the Southwest Pacific. Bases in the Central Pacific. Bases in the Marianas and Iwo Jima. Bases in the Philippines. Okinawa. Appendix The Seabee record. Index.

Note: The official history of the Bureau of Yards and Docks and the Civil Engineer Corps of the United States Navy including the part of the Seabees, during World War II is presented in these two volumes. They include record of the pre-war status of the shore establishment, of the events of the preparatory periods preceding Pearl Harbor activities during the war itself, and brief summaries of the demobilization period. The narrative of events is correlated with the policies and decisions which were the bases for each course of action. Included as illustrative material are numerous photographs of installations in the United States and overseas and maps of the advance bases.

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